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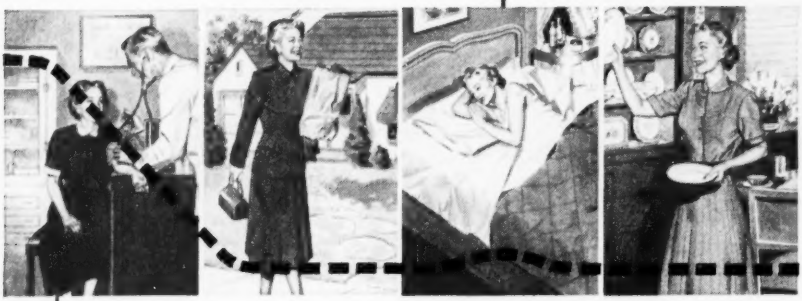

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Plotz[2] .....*80% fewer attacks*
Dailheu[3] .....*80% fewer attacks*

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1. Humphreys, P., *et al.*: Angiology 3:1 (Feb.) 1952. 2. Plotz, M.: N. Y. State J. Med. 52: 2021 (Aug. 15) 1952. 3. Dailheu-Geoffroy, P.: L'Ouest-Méd., vol. 3 (July) 1950.

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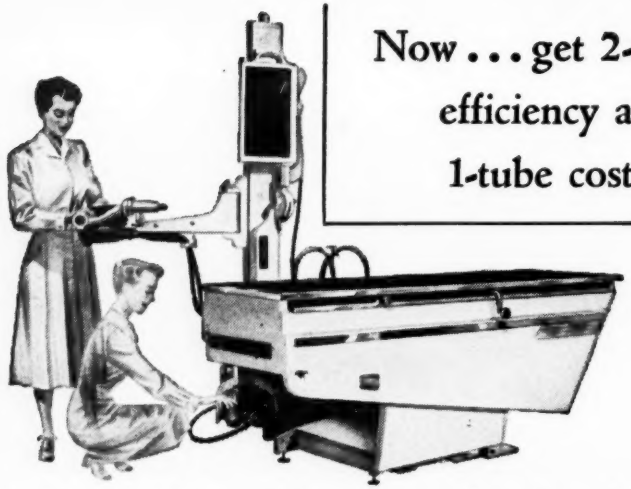

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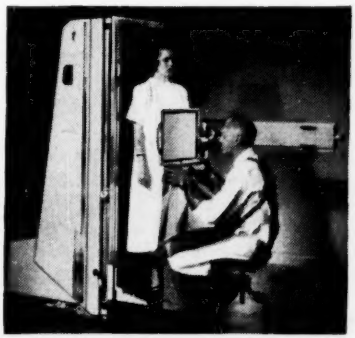

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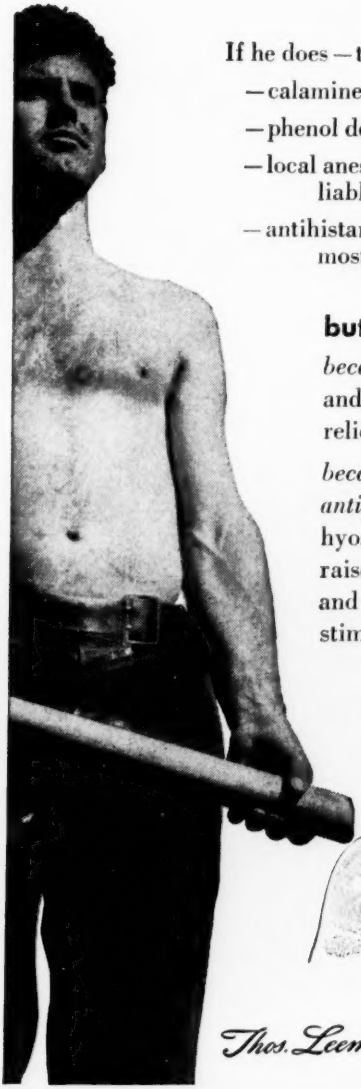

If he does — treatment should exclude

— calamine preparations which are ineffective[1]

— phenol derivatives which are irritating[2]

— local anesthetics of the "caine" group liable to cause contact dermatitis[3]

— antihistaminics which may produce some of the most severe reactions due to sensitization[3]

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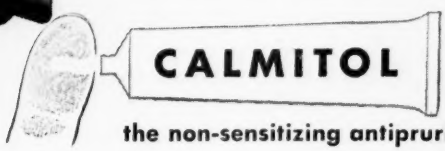
because Calmitol contains specific antipruritic agents — camphorated chloral, hyoscyamine oleate and menthol — which raise the threshold of sensory nerve endings and skin receptors, thus inhibiting itch stimuli at the point of origin.

1. Goodman, H.: J.A.M.A. 129: 707, 1945.
2. Lubowe, I. I.: New York State J. Med. 50: 1743, 1950.
3. Nomland, R.: Postgrad. Med. 11: 412, 1952.



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THE JOURNAL OF DIAGNOSIS AND TREATMENT

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(1) Youmans, J. B., in Handbook of Nutrition, Chicago, American Medical Association, 1951, p. 577; (2) Hansen, A. E., in Mitchell-Nelson Textbook of Pediatrics, ed. 5, Philadelphia, W. B. Saunders Co., 1950, p. 106; (3) Heck, F. J.: J.A.M.A. 148: 783, 1952.

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for

July 15

1953

Modern Medicine

Vol. 21, No. 14

THE MAN ON THE COVER is Dr. Ancel Keys, Professor and Director of the Laboratory of Physiological Hygiene of the University of Minnesota, Minneapolis. Dr. Keys served as a special consultant on foods to the Secretary of War during World War II and in 1951-52 was senior Fulbright scholar at Oxford University. Fellow of the American Public Health Association and member of the board of scientific directors of the American Heart Association, Dr. Keys also holds membership in such organizations as the American Association for the Advancement of Science, Minnesota Academy of Science, and the American Society of Biological Chemists. He is senior author of the two-volume work, *Biology of Human Starvation*. The report on page 90, "Diet and Incidence of Heart Disease," appeared originally in the *Bulletin of the University of Minnesota Hospitals and Minnesota Medical Foundation.*

Contents for July 15 1953

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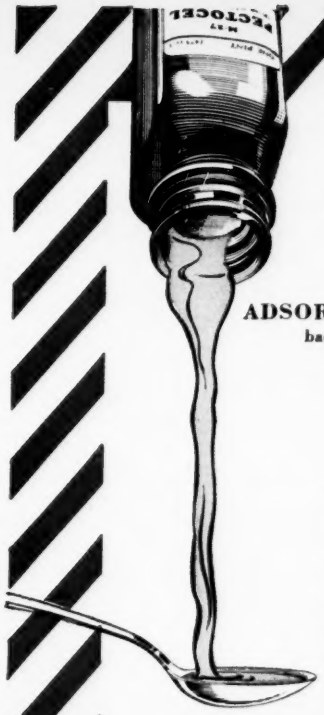

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Children: *In proportion to age and severity of the condition.*

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Contents for July 15 1953

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maleate

1. Silbert, N. E.: New England J. Med. 242:931, 1950.
2. Eisenstadt, W. S.: Journal Lancet 70:26, 1950.

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logically suspected

Diabetes and obesity are closely linked together.[2,3] More than 8 out of 10 diabetics are overweight before the onset of their disease.[1,4,5] "In persons with nondiabetic glycosuria . . . the frequency of subsequent diabetes [is] four times as high in overweight patients."[4] "Of the major diseases, diabetes [in overweight individuals] showed relatively the greatest excess mortality – more than three times the expected number in each sex."[6] It is logical, therefore, to suspect – and test – all overweight patients.

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LETTER FROM THE EDITORS

Dear Reader:

The other day we got a letter from a young physician who had been called into military service.

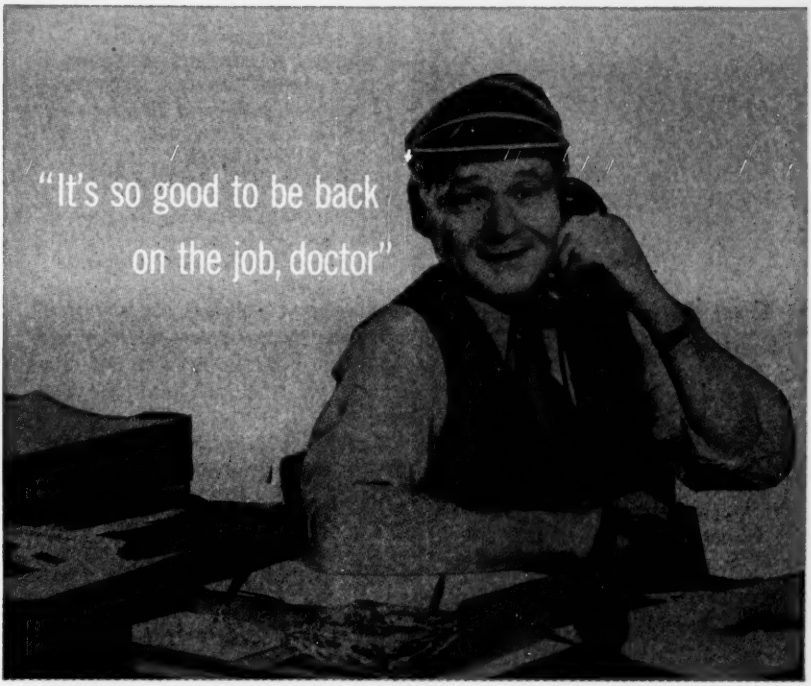
He was sent to the Far East and in short order found himself to be the sole medical officer in a prisoner-of-war camp in Youngchow, Korea. He wrote to ask for copies of *Modern Medicine* which he desired as "a continuing link to medical thinking and American civilization."

Arrangements were made to send him our journal regularly. Our mailing department gives special attention to changes in military addresses so that the doctors called into service can maintain contact with medicine back home. Naturally, some men fail to notify us of address changes. In one way or another, however, they get to see *Modern Medicine.*

A commander in the Navy recently wrote to thank us for mailing *Modern Medicine* to him. "I have four other doctors aboard ship," he wrote, "and we are all appreciative of your journal. It is the best, most complete, and most up-to-date medical magazine we have ever had."

This kind of talk is gratifying but it makes us humble, too. We approach our task with a renewed resolve to do our level best to make *Modern Medicine* continue to merit the approval of the commander and of his colleagues at home.

The Editors



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Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Six Years Without Mishap

TO THE EDITORS: I do not agree with Dr. Milton S. Lloyd's statement in the Medical Forum section (*Modern Medicine*, May 15, 1953, p. 184) that the use of Sodium Pentothal anesthesia for esophagoscopy without preliminary intubation is dangerous. I have been using intravenous Sodium Pentothal routinely for esophagoscopy without preliminary intubation for both diagnostic-therapeutic procedures and foreign body extraction for the past six years, not only without a mishap but also without any difficulty with respect to the airway.

Furthermore, Dr. Lloyd's reason, namely, that it is difficult to perform esophagoscopy without stimulating cough, may be true; however, I do not consider this a disadvantage since the presence of the cough reflex is an aid to expectoration of possible aspirated material.

I. M. SCHNEE, M.D.
Paterson, N. J.

Fund for Foundation

TO THE EDITORS: I appreciate receiving *Modern Medicine* gratis for all these years, and hope to continue to receive it. Your journal is a great help in my practice and I like the way the articles are condensed in brief, to-the-point language.

I have a suggestion. Why not set up a Modern Medicine Foundation for education and research? Ask everyone who receives *Modern Medicine* to send $10, half of which will be considered a donation. The other $5 could be used to print the *Modern Medicine Annual*, a copy of which would be sent to each donor to the Foundation.

M.D., INDIANA

Edema and Migraine

TO THE EDITORS: I have read with interest the correspondence of Dr. Robert S. Srigley dealing with relief of migraine with Mercuhydrin (*Modern Medicine*, May 15, 1953, p. 16).

Our findings at the Headache Clinic at George Washington University confirm Dr. Srigley's clinical impressions of the role of sodium retention at the onset of migraine attacks. This is also noticed clinically in the fluid retention which occurs premenstrually in many women subject to migraine.

(Continued on page 24)

Knox Gelatine proven effective in the treatment of Refractory Anemias

Recent investigation shows[1] hemoglobin concentration and red blood cell count increased in every case, with high statistical significance, in refractory anemia patients plateaued to iron and getting a good diet.

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1. Reich, C., and Mulinos, M. G., Treatment of Refractory Nutritional Anemia with Gelatine. Bull. N. Y. Med. Coll. March 1953.

2. Whipple, G.H., and Robscheit-Robbins, F.S.: Amino Acids and Hemoglobin Production in Anemia, J. Exper. Med. 71:569, 1940.

3. Shemin, D., and Rittenberg, D.: Utilization of Glycine for the Synthesis of the Porphyrin, J. Biol. Chem. 159:567, 1945; The Biological Utilization of Glycine for the Synthesis of the Protoporphyrin of Hemoglobin, J. Biol. Chem. 166:621, 1946.

4. Grinstein, M., Kamen, M., and Moore, C.V.: The Utilization of Glycine in the Biosynthesis of Hemoglobin, J. Biol. Chem. 179:359, 1949.

5. Graff, J., and Hoverman, H.D.: On the Metabolism of Beta-Alanine, J. Biol. Chem. 186:369, 1950.

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- Rauwiloid offers an effective means of treating mild and moderate hypertension, without subjecting the patient to the hardship and discomfort attending so many other drugs employed for this purpose.
- Produces a calming, tranquilizing effect, without the drowsiness so frequently observed with barbiturates.
- May be given for long periods without loss of therapeutic efficacy; tolerance has not been observed.
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- Relieves associated symptoms; no dosage determination problem.
- Rauwiloid rarely produces side actions, hence patients need be seen only at long intervals. Patients on Rauwiloid are more comfortable, feel better, and are more cooperative.

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CONTROL OF ASSOCIATED SYMPTOMS

Rauwiloid represents an alkaloidal fraction obtained from the tropical plant *Rauwolfia serpentina;* it is generically designated the *alseroxylon fraction.*

● Each batch of alkaloidal extract is tested in mammals (dogs) for its effectiveness in producing drop in blood pressure, bradycardia, and sedation.

● Clinically, Rauwiloid produces (1) moderate drop in blood pressure, (2) desirable mild bradycardia, (3) an appreciated calming influence, and (4) prompt relief of headache, dizziness, and other symptoms.

● The hypotensive action of Rauwiloid is slow in developing, and may not attain its maximum effect for weeks or even months. However, the ability to lower blood pressure is limited, regardless of dose.

● Rauwiloid is not ganglionic or adrenergic blocking and does not interfere with postural reflexes. Even at several times the therapeutic dosage, undesirable side actions are rarely seen with Rauwiloid.

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● The average dose of Rauwiloid + Veriloid is one tablet 3 times daily, ideally after meals, at intervals of not less than 4 hours. Each tablet contains 1 mg. of Rauwiloid and 3 mg. of Veriloid. Available in bottles of 100 tablets.

Bibliography:

Wilkins, R. W., and Judson, W. E.: The Use of Rauwolfia Serpentina in Hypertensive Patients, New England J. Med. *248*:48 (Jan. 8) 1953.

Wilkins, R. W.: New Drug Therapies in Arterial Hypertension, Ann. Int. Med. *37*:1144 (Dec.) 1952.

Vakil, R. J.: Clinical Trial of Rauwolfia Serpentina in Essential Hypertension, Brit. Heart J. *2*:350, 1949.

Wilkins, R. W.: Combination of Drugs in the Treatment of Essential Hypertension, Mississippi Doctor *30*:359 (Apr.) 1953.

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These women complain of increase in weight, fullness of the breasts, generalized edema, and a full, congested feeling of the head. At times this condition is accompanied by a severe premenstrual tension state.

We have found that limitation of fluid and salt for ten days before each menstrual period will often alleviate these symptoms and at times prevent the expected migraine onslaught. It might be necessary to augment the fluid and salt restriction by premenstrual administration of enteric-coated ammonium chloride, laxatives, progesterone, or testosterone.

Among our series of migraine patients, quite a few will exhibit marked fluid retention or edema during or preceding the attack. At times, this retention is so severe as to alter facial contours grotesquely. In addition to the above described routine to prevent salt retention, these patients are told to take a saline purge every other day and to receive 1 or 2 mercurial diuretic injections during menstruation. Our management of these patients is described in more detail in our present series of Headache Clinics (*Am. Pract.* 1:1012, 1950; 2:163, 755, 1951; 4:31, 1953).

May I congratulate Dr. Srigley for presenting this often-neglected aspect of the migraine problem to the general profession.

LESTER S. BLUMENTHAL, M.D.
Washington, D.C.

"But doctor,

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Tonsils and Poliomyelitis

TO THE EDITORS: In the papers relating to poliomyelitis, the essential point is often neglected. Numerous statistics reveal that paralytic poliomyelitis occurs in much higher degree in countries where tonsillectomy is employed the most commonly.

It is my opinion that the tonsils should be removed only if there are absolute indications which, according to my experience, are seldom present.

I am sure that if unnecessary tonsillectomies were eliminated, incidence of poliomyelitis would be reduced.

Bulbar poliomyelitis occurred in a 24-year-old woman in my own family. She was the only one of the family who had had tonsillectomy as a child and the only one of all members who got poliomyelitis twenty years later. I have only one conclusion: Diminished number of tonsillectomies will decrease the incidence of poliomyelitis!

ARTHUR SAMUEL, M.D.
Kankakee, Ill.

Antibiotic Discoveries

TO THE EDITORS: I read in the April 15, 1953 issue of *Modern Medicine* (p. 20) your statement that: "One of the ambitions of the editors of *Modern Medicine* is to bring quickly to our readers notes of important discoveries in our field. Occasionally an important discovery is not sufficiently noted, and then it lies forgotten for years. . . . For instance, way back in 1899 Emmerich and Loew wrote about the remarkable antibiotic properties of a substance which could be extracted from old cultures of *Bacillus pyocyaneus*."

Still closer than Emmerich and Loew came Gosio three years earlier, because he worked with *Penicillium* species.

In an article of mine published in *Acta medica Scandinavica* (126: 60-64, 1946), I set forth the following conclusions:

1] Gosio, an Italian, discovered the antibiotic substance present in certain *Penicillium* species in 1896. Rediscoveries were made by Lieske of Germany in 1921, by Gratia and Dath of Belgium in 1924, and by Fleming of England in 1929.

2] Gosio isolated the antibiotic substance by making crystals of this substance in 1896. The isolation was repeated by Gratia in 1927 and by Florey and associates of England in 1940.

3] Gratia and Jaumain of Belgium were the first discoverers of the therapeutic value of the antibiotic penicillium extract in 1927. A rediscovery was published by Florey and associates in 1940.

JOHAN T. PETERS, M.D.
Sodus, N. Y.

Painful Zinc Neuritis

TO THE EDITORS: In my opinion, prolonged administration of insulin injections containing zinc is causing a painful zinc neuritis.

Have any of my professional brethren made a similar observation?

ALFRED R. ROSS, M.D.
Wellsville, N. Y.

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References:

1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Slepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

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D

Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: A statute forbade unlicensed practice of medicine "for compensation or reward, . . . accepted, directly or indirectly." Could an unlicensed person avoid application of the statute to him by showing that he made no charge for services and received only voluntary contributions from his patients?

COURT'S ANSWER: No.

So decided the Arizona Supreme Court in upholding an injunction against continued unlawful practice (253 Pac. 2d 344).

PROBLEM: A comminuted fracture in a knee area occurred. Defendant, an orthopedic surgeon, applied a cast from midthigh to toes. Gangrene developed as a result of circulatory interference. In the patient's suit for malpractice, did the circumstances exclude a theory that interference occurred through causes that were not the doctor's fault?

COURT'S ANSWER: No.

The New Jersey Superior Court, Appellate Division, decided that the patient failed to substantiate by proof her claim that the surgeon's failure to bivalve the cast two or three days earlier and to examine the leg caused the gangrene. So, the court set aside a judgment in favor of the patient and ordered a new trial.

The following points were decided: Ordinarily, preponderance of evidence on a disputed fact is not necessarily determined by the number of witnesses pro and con. But a larger number of qualified medical experts giving competent testimony is a valuable aid when establishing preponderance of dependable opinion.

The New Jersey Court's statement, "an attending physician is in a better position to express an opinion as to cause and effect than a medical expert," is in possible conflict with conclusions of appellate courts of some other states (95 Atl. 2d 161).

PROBLEM: An applicant for health insurance stated that he had never had a physical condition requiring a doctor's care. He had been examined semiannually for tuberculosis but no medication or treatment was prescribed. Was his answer conclusively false, so as to vitiate the insurance?

COURT'S ANSWER: No.

The Maryland Court of Appeals ordered reinstatement of judgment in favor of insured, after a jury had found that his answer was not false. Recognizing that answers to such questions in insurance applications are to be considered as a layman would ordinarily regard them, the court said that an average man might treat periodical examinations, unaccompanied by treatment, simply as examinations and not medical care (94 Atl. 2d 454).

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PROBLEM: An incorporated health center was fostered by a large lumbering corporation interested in the hospitalization and treatment of its employees. Could the lumbering firm escape liability for malpractice upon a pay patient on a theory that the institution constituted a charitable organization and, as such, was immune from liability for negligence of its doctors?

COURT'S ANSWER: No.

So decided the Arkansas Supreme Court (256 S. W. 2d 548).

PROBLEM: In performing an appendectomy upon a young woman, a surgeon discovered that her fallopian tubes were infected, swollen, and sealed at both ends. Unable to secure the patient's assent because of anesthesia, and without seeking approval of the stepmother who was nearby, the surgeon removed the tubes. Did that constitute a legal wrong, unless it were proved that there was such emergent need for the removal that the operation could not wait until consent was secured?

COURT'S ANSWER: Yes.

The Kentucky Court of Appeals set aside dismissal of the suit, ordered by the trial judge, and directed that there be a new trial on the ground that the jury had not been correctly instructed as to the law governing the case.

The Court of Appeals decided that unauthorized surgery is not merely negligence, but "trespass" or "assault."

Exception to the rule exists only when the patient is unconscious and when it is necessary to operate before consent can be obtained.

As to minor patients—this patient was 20 years old and a minor under Kentucky law—the Court of Appeals also cited authority to the effect that the consent of the par-

(Continued on page 36)

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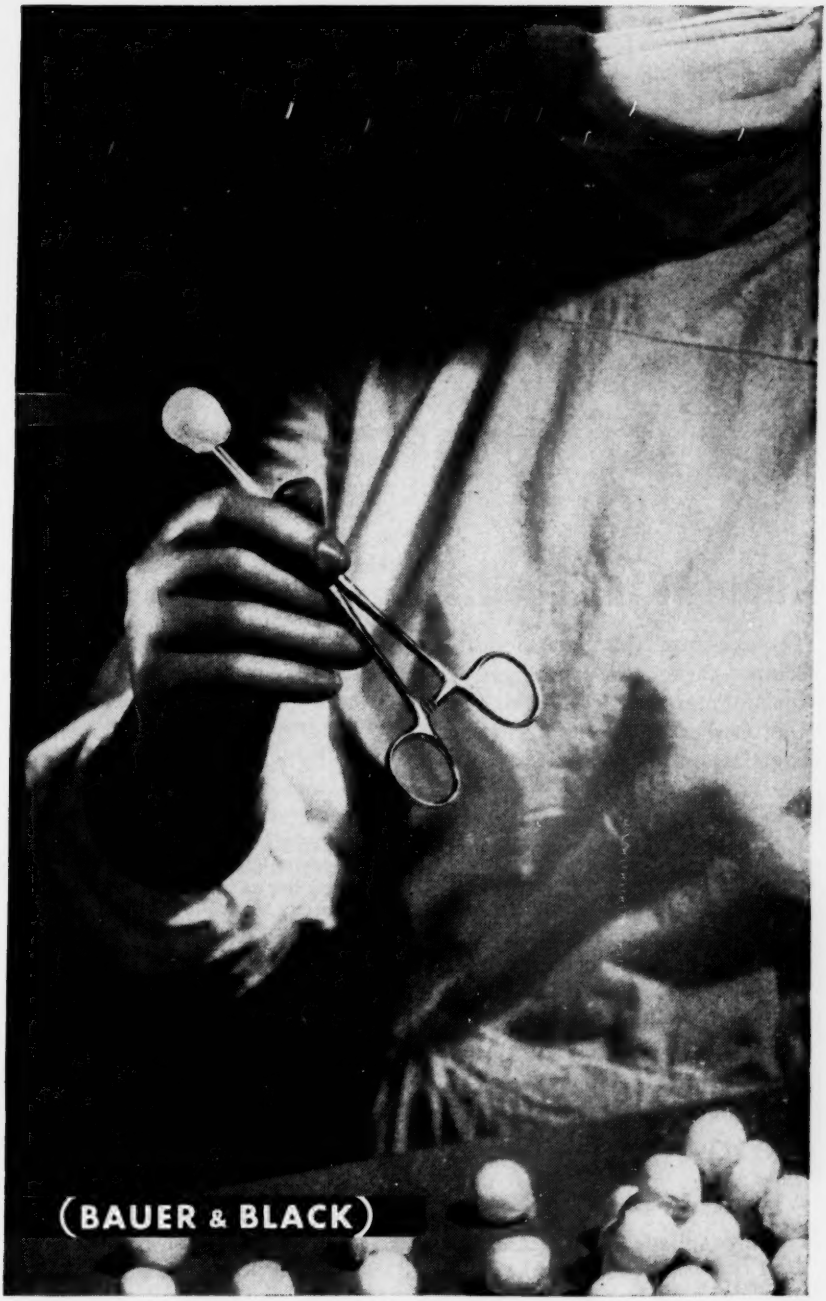
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ents or guardians is required, unless immediate surgery is needed.

The Court of Appeals stated: "Although delay . . . might have proved harmful, even fatal, there still was time to give the parent and the patient an opportunity to weigh the fateful question." Had the operation been for removal of the tubes and need for an appendectomy developed, the latter excision might have been performed without consent on medical theories that the appendix is useless and at least potentially dangerous (254 S. W. 2d 474).

As supporting this dictum, the court cited a decision of the Municipal Court of Appeals, District of Columbia (34 Atl. 2d 626). In that case a surgeon, operating under mistaken diagnosis of tubal pregnancy, discovered that the patient had a double uterus and acute appendicitis. The patient's husband unsuccessfully resisted suit for the surgeon's fee for an appendectomy on the ground that surgery was not authorized.

PROBLEM: Will the courts take judicial notice that it is possible for a qualified doctor to determine the age of a person, within three years, by examination of his bone structure and physical characteristics?

COURT'S ANSWER: Yes.

In a proceeding involving the question whether an applicant for admission to this country was an American citizen as being the son of a citizen but born in China, it was material to determine whether he was actually much younger than 18 or 19, as claimed by him.

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judge of the U. S. District Court of California, Southern District, acted upon reports from two Hong Kong doctors that, based upon separate radiologic examinations of applicant, they found him to be about eight years younger than he claimed to be. The court deemed it significant that applicant either did not attempt to secure counter medical certificates or did not produce them because they were unfavorable.

The judge observed that modern methods have demonstrated that bodily changes occur at certain ages, and that it may be determined what stage of puberty a subject has reached. Evidence produced by reputable experts showed that a person's age may be determined within three years by various examinations, and that there is a marked distinction between an individual of 12 or 13 and another of 18 or 19 (110 Fed. Supp. 64).

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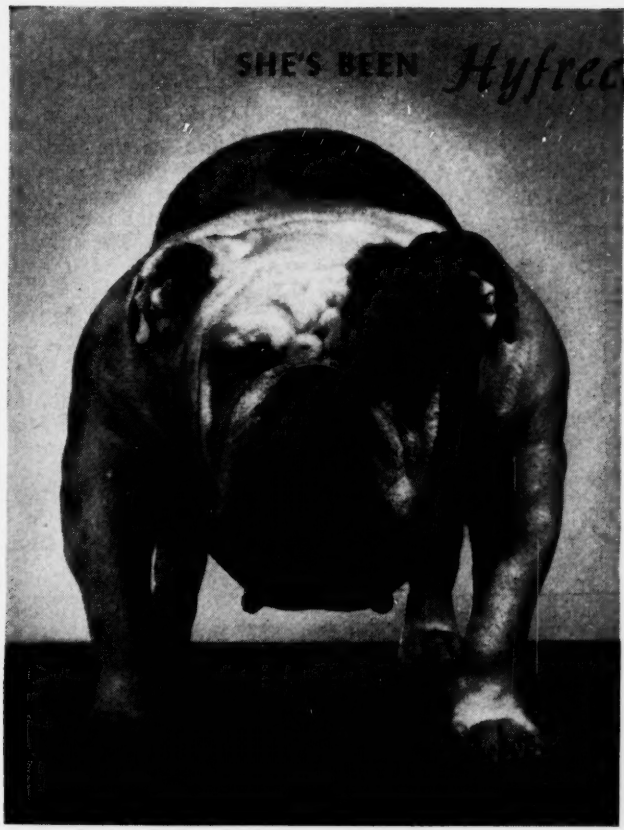

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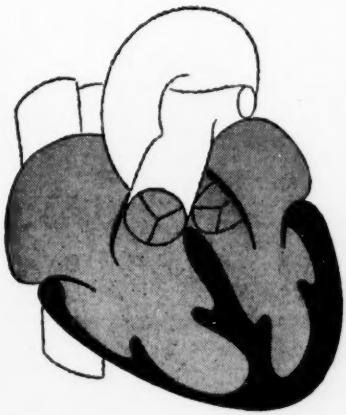

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*Strauss, V.; Simon, D. L.; Iglauer, A., and McGuire, J.: Clinical Studies of Intramuscular Injection of Digitoxin (Digitaline Nativelle) in a New Solvent, Am. Heart J. 44:787, 1952.

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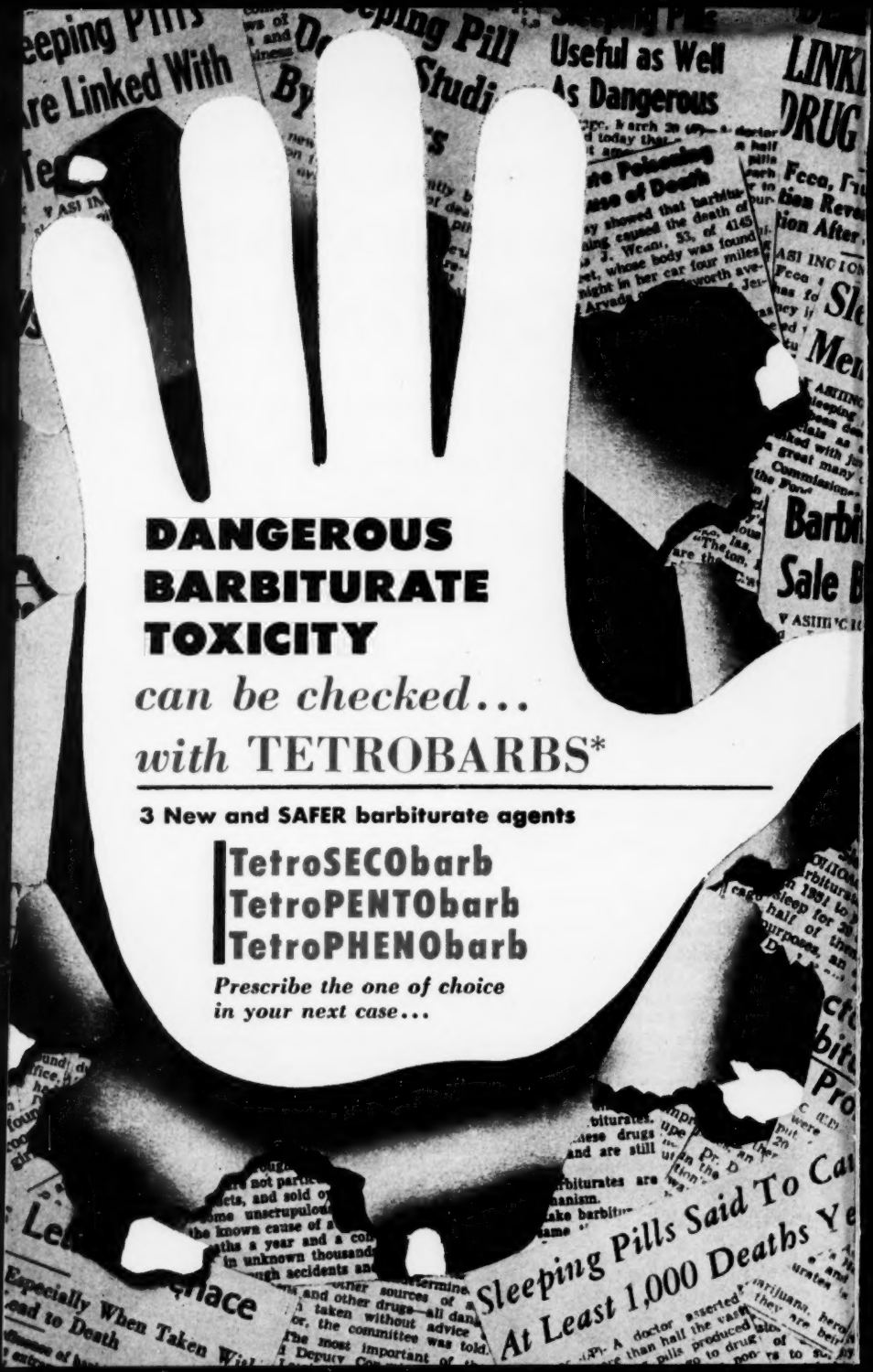
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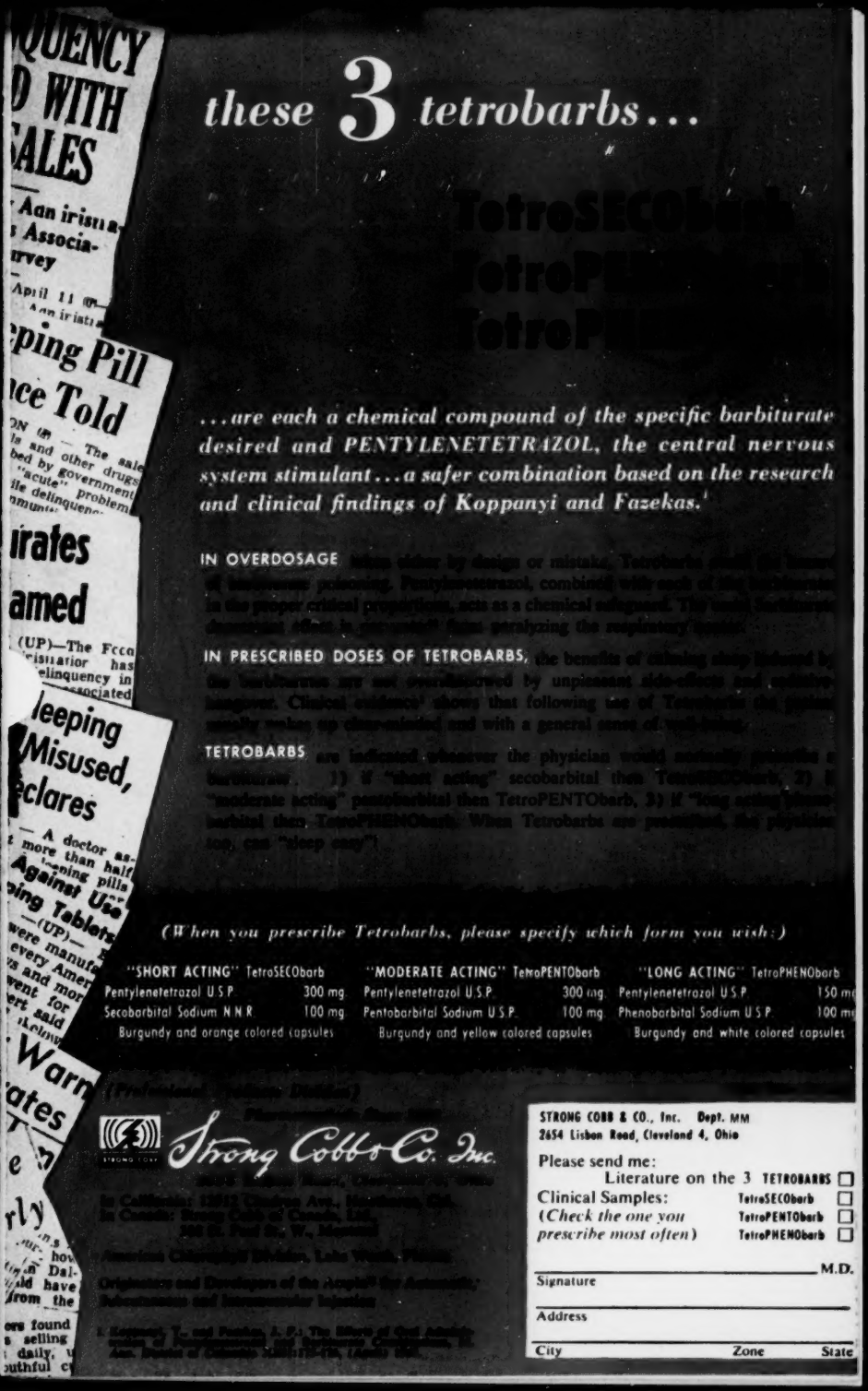
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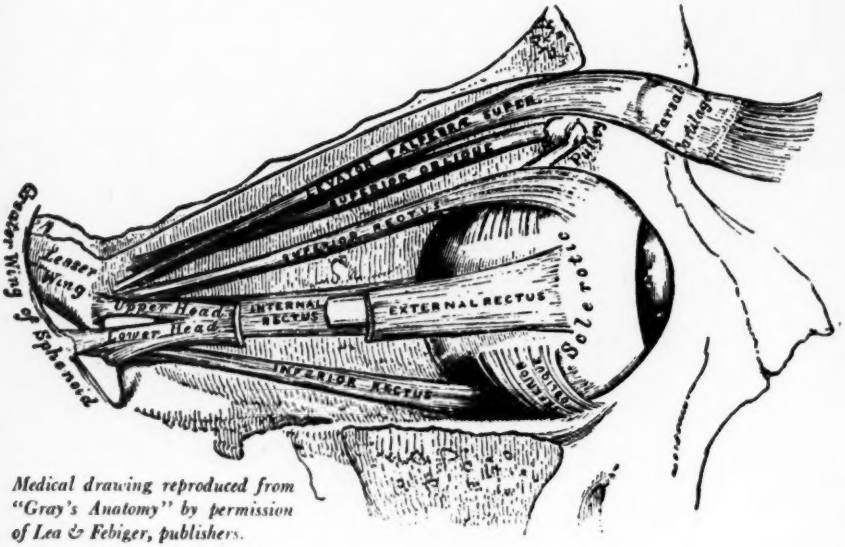

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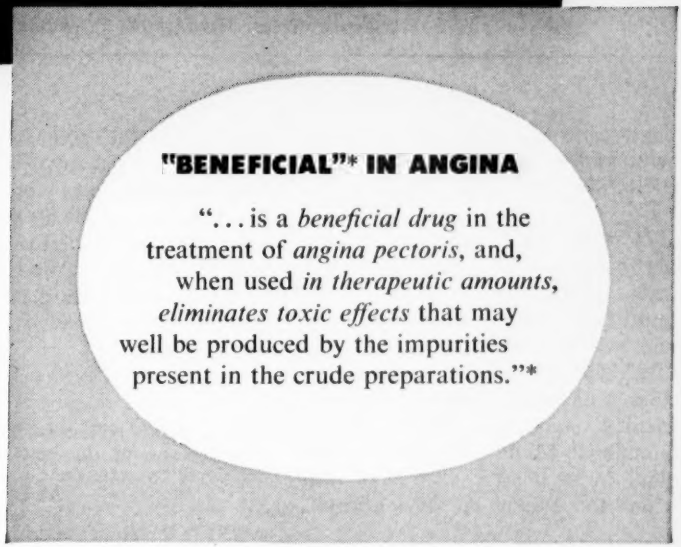

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Publications on Khelloyd

*Nalefski, L.A.; Rudy, W.B., and Gilbert, N.C.: Use of Crystalline Visammin (Khelloyd) in Treatment of Angina Pectoris, Med. Lit. Extr., J.A.M.A. *150*:720 (Oct. 18) 1952, from Circulation *5*:801–960 (June) 1952.

Scott, R.C., and Seiwert, V.J.: The Treatment of Angina Pectoris with Pure Crystalline Khellin, Ann. Int. M. *36*:1190 (May) 1952.

Conn, J.J.; Kissane, R.W.; Koons, R.A., and Clark, T.E.: The Treatment of Angina Pectoris with Khellin, Ann. Int. M. *38*:23–27 (Jan.) 1953.

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Questions & Answers

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QUESTION: What are the indications, if any, for the use of diathermy in otolaryngology besides sinusitis?

M.D., Texas

ANSWER: *By Consultant in Otolaryngology.* Diathermy is sometimes applied for the treatment of painful muscles around the head and neck when deep heat seems desirable. This form of heat has also been utilized for treating cervical adenitis, sinus infections, and ear infections. Many otologists prefer other forms of heat, such as a lamp which the patient employs himself.

QUESTION: What is a defense reflex and a mass reflex?

M.D., Michigan

ANSWER: *By Consultant in Neurology.* The spinal defense reflexes usually become manifest when the action of the higher centers has been removed. In a normal person, any painful stimulus results in quick withdrawing of the legs, a flexion of the hip and knee, and often plantar flexion of the toes. This phenomenon is greatly aggravated in lesions of the spinal cord and is referred to as the flexion spinal defense reflex.

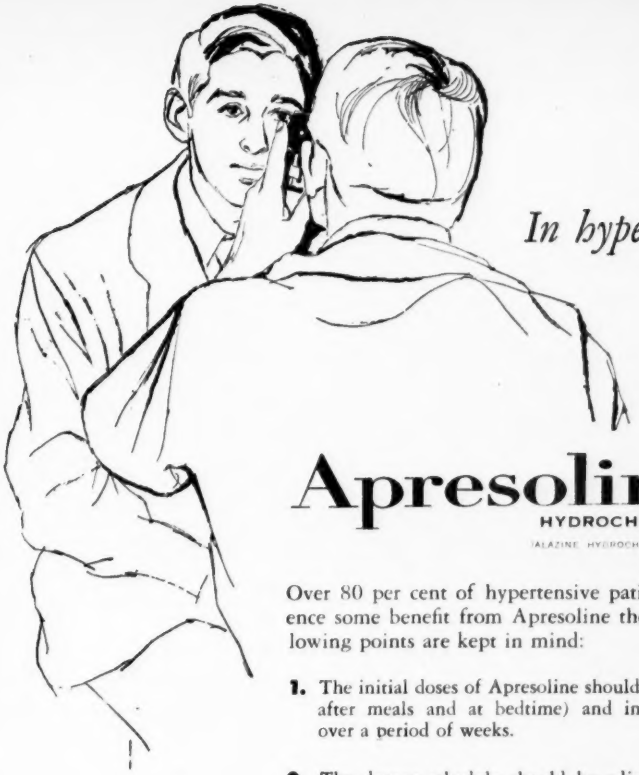
In such cases, a pronounced flexion of the toe and knee with a dorsiflexion of the great toe as well as fanning of the small toes occurs. The response may be bilateral. When accompanied by severe muscular contraction of the abdominal wall, evacuation of the bladder and bowels, sweating, and arrhythmias, this condition is called a mass reflex of Riddoch.

QUESTION: What is the cause and what treatment do you suggest for nocturnal dysesthesia?

M.D., New York

ANSWER: *By Consultant in Neurology.* The cause of nocturnal dysesthesia is still questionable. Some believe that this condition is a vasomotor neurosis caused primarily by overreaction to emotional factors. The symptoms frequently appear after overexposure to cold and moisture. Some investigators feel that the condition may result from a compression of the blood supply of the brachial plexus by the shoulders during sleep.

Treatment is strictly symptomatic. Heat in the form of hot dry packs, particularly upon retiring, is often helpful. Mild sedation should be tried. Small doses of quinine given every night before retiring may help to relieve the symptoms.



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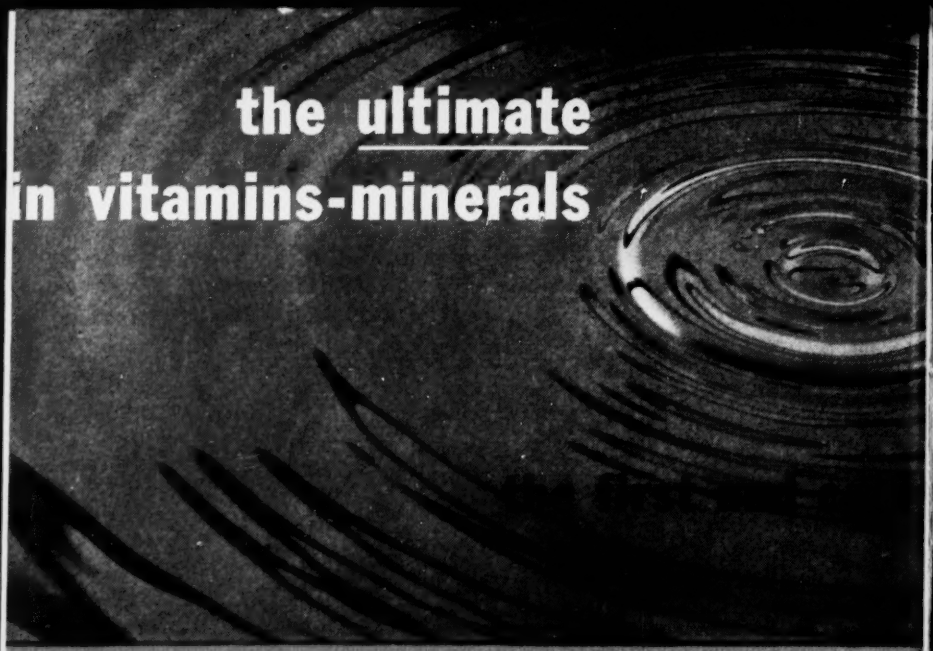

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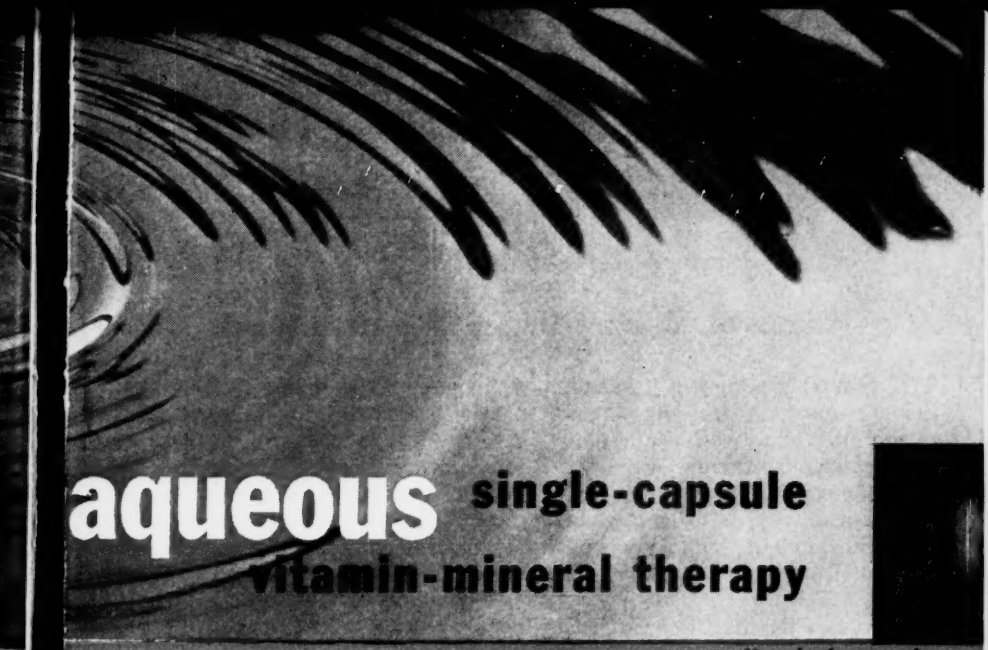

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Washington LETTER

Limits on Military Medical Services Sought

THE federal government is rapidly moving toward a decision on one of the most controversial questions in the medical field: How far should the government go in providing medical care for the wives, children, mothers, and other dependents of men in the armed forces?

For years this has been an issue between the military departments and civilian medicine, represented principally by American Medical Association and American Dental Association. The military officials, naturally, want to provide as much care and hospitalization as possible for their own people. The doctors, naturally, want this care to be furnished by private physicians and nongovernment hospitals whenever possible.

The width and breadth of the controversy are almost without limit. If not all military families should receive care, where should the cutoff point come? With the families of colonels, of majors, or of captains? Also, how much care should be furnished? Complete, or restricted in line with Blue Cross and Blue Shield regulations? When should chronic cases be discharged from military hospitals and made the responsibility of the family or welfare agencies?

There are no new facets to the problem. However, the Eisenhower administration has added a catalyst in the form of a determination to effect economies wherever possible and to institute businesslike procedures everywhere—period.

(Continued on page 54)

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†Busis, S. N., and Friedman, L. L.: Antibiotics & Chemotherapy 3:299 (March) 1953.

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A: Scientific measurements have proved that cellulose, cotton or crepe paper filters do not take out a really effective amount of nicotine and tars.

However, these same tests also have proved that KENT's exclusive Micronite Filter *approaches 7 times the efficiency of other filters in the removal of tars and nicotine* and is virtually twice as effective as the next most efficient cigarette filter.

Q: Do physiological reactions to filter cigarettes differ?

A: The drop in skin temperature occurring at the finger tip induced by filtered cigarette smoke was measured according to well-established procedures. (a, b)

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degrees. For KENT's Micronite Filter, there was no appreciable drop.

Q: Does an effective cigarette filter also remove the flavor?

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References Cited

a. *J.A.M.A.*, Vol. 103, 1934, p. 318
b. *J.A.M.A.*, Vol. 135, 1947, p. 417

*PATENT APPLIED FOR

The instrument in this particular case is Defense Secretary Charles E. Wilson. In the medical field, he first demonstrated that he meant what he said by ordering the military services to reduce the ratio of doctors to troops by about 15%. Then, a month or so ago, he appointed a commission to look into the problems of medical care for dependents.

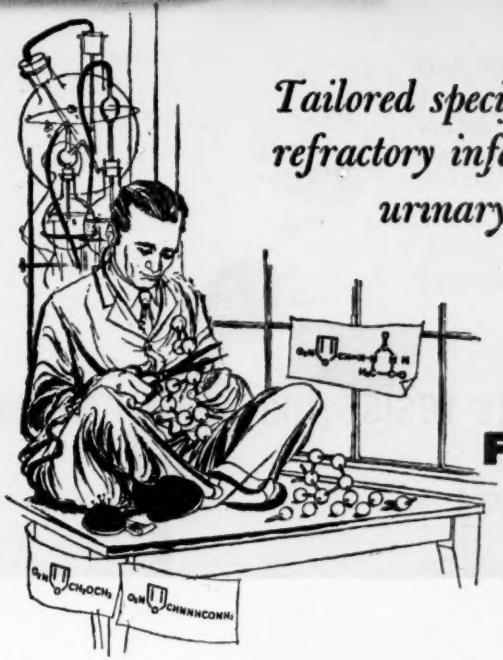
Probably for public relations reasons, because all the facts and all the arguments are well known, the commission conducted public hearings. Then it settled down to study the situation and make recommendations to Mr. Wilson. Its report should be coming out soon.

Mr. Wilson is a realistic man, so he did not ask the commission to determine whether care of dependents should be continued; he realized that dependent care of some sort would have to be sustained. He asked the commission to suggest some limitations of dependent care, and some way in which the services could be satisfied short of complete care for all families and dependents of officers and enlisted men.

At the hearings, some members of the commission showed interest in a participating insurance plan, under which the government would subsidize health and hospitalization policies for men in the lower ranks. Thus the families of the men could select their own doctors and hospitals and be governed by the usual Blue Cross and Blue Shield programs.

At the same time, the commission indicated that for men overseas, and those stationed in places within the United States where

(Continued on page 58)



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good private medical care is not available, uniformed doctors and military hospitals would have to be used.

One of the more impressive witnesses was Dr. Richard L. Meiling who, as head medical officer of the Defense Department in 1949-50, did more than any one person to unify the three medical services and bring in a degree of efficiency. He is now a practicing physician in Columbus and Associate Dean of the College of Medicine at Ohio State University.

Dr. Meiling underscored the fact that the military medical departments now not only are concerned with providing care for uniformed men and their families but also want to recruit patients for the training of doctors in military hospitals. He recalled that a State Department official approached him with the suggestion that the military medical services take over responsibility of dependents of certain State Department personnel within the United States. The official, Dr. Meiling said, had been encouraged by the Army and Navy Surgeons General, because the additional family patients would give military interns and residents a more rounded practice.

It was also pointed out to the commission, without rebuttal by the military, that the cost of caring for dependents always is a "hidden item" in military budgets.

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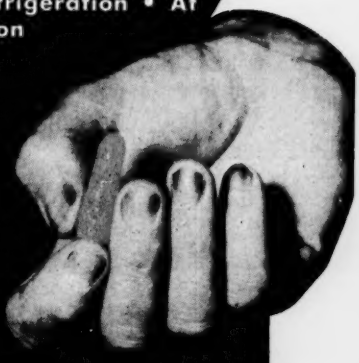

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The problem before the commission does not concern only a few hundred families at isolated posts. Army Surg. Gen. George Armstrong estimates that there is an average of 1.1 dependent for all uniformed personnel in Army, Navy, and Air Force, or more than 3.5 million persons. Not all of them receive complete medical care, and probably a great many receive no medical care at all from the government. In fact, the spotty character of medical care provided is an irritant to military families themselves.

In some areas, where there are adequate military medical personnel and facilities, the wives and children of generals through privates have everything taken care of. But if the families are unable to reach hospitals and clinics, they are "on their own" as far as care from doctors and hospitals is concerned.

Also, military medical departments often hire doctors at so much an hour to staff clinics where most of the patients are civilian dependents. The rate per hour is regulated by the supply of doctors in the particular community. If the doctors need the money or are impelled by patriotic or humanitarian motives, the clinics are well staffed. But again, it is natural for these private physicians to wonder if their own practices wouldn't be

(Continued on page 64)

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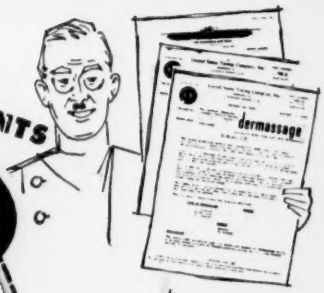

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WASHINGTON LETTER

more substantial if fewer civilians got medical care at government ex-

Despite the complexities of the problem, Mr. Wilson will probably

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For the treatment of gonorrhea, the recommended dose is 2 tablets initially followed by one tablet at 6-hour intervals for 2 doses. This course may be repeated if necessary. BOTTLES OF 12 TABLETS.

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PEDIATRICS

Prepared In The Interests Of The Profession By The Pediatrics Consultant Staff Of H. J. Heinz Company

more substantial if fewer civilians got medical care at government expense.

That there is another side to the story will be admitted by anyone who has made any effort to get the facts. Since before the start of the century, the Army and Navy medical departments have been expanding their treatment of dependents. Among the military, medical care for the family, if you are in a position to take advantage of it, is one of the benefits of a career. Without medical benefits, the military services would, without question, have an impossible problem in inducing the right kind of noncommissioned men to enlist and reenlist.

Despite the complexities of the problem, Mr. Wilson will probably keep the commission at its task until some concrete proposals have been made. At least 3 suggestions will undoubtedly be offered: [1] a system of government-subsidized health-hospital insurance for enlisted men's families, [2] a limitation of coverage for all dependents in military hospitals, and [3] a realistic system of military bookkeeping that will show in a dollar-and-cents column just how much dependent care is costing the government.

Washington Notes

¶ The House Ways and Means Committee has a long schedule of hearings on income tax deduction

PEDIATRICS BULLETIN

Prepared In The Interests Of The Profession By The Pediatrics Consultant Staff Of H. J. Heinz Company

Iron-lack **ANEMIA**

As we know, ordinarily little iron is lost from the body except in cases of accidental hemorrhage. The iron released by normal red cell destruction is re-used in the construction of new cells.

● **As a baby** doubles and triples in weight, however, it is obvious that more hemoglobin must be constructed. Experience has taught us that babies born immaturely, or from mothers who were themselves deficient in iron intake, are supplied with only a small amount of reserve iron at birth. Since neither breast nor cow's milk contains much iron, such infants, and others particularly fast growing, are unusually susceptible to nutritional anemia. Since the iron reserve cannot be estimated, it is not always apparent which babies are the most susceptible.

● **Many foods** either contain no iron or have little readily available. The mother may do an excellent job in getting a baby to take solid foods early, and yet not realize that potatoes and gravy, certain cereals, vegetables and breads furnish little iron. We, as physicians, are responsible for seeing that the mother feeds her infant, preferably by the third month of life, supplementary foods containing an adequate amount of iron in a readily available form.

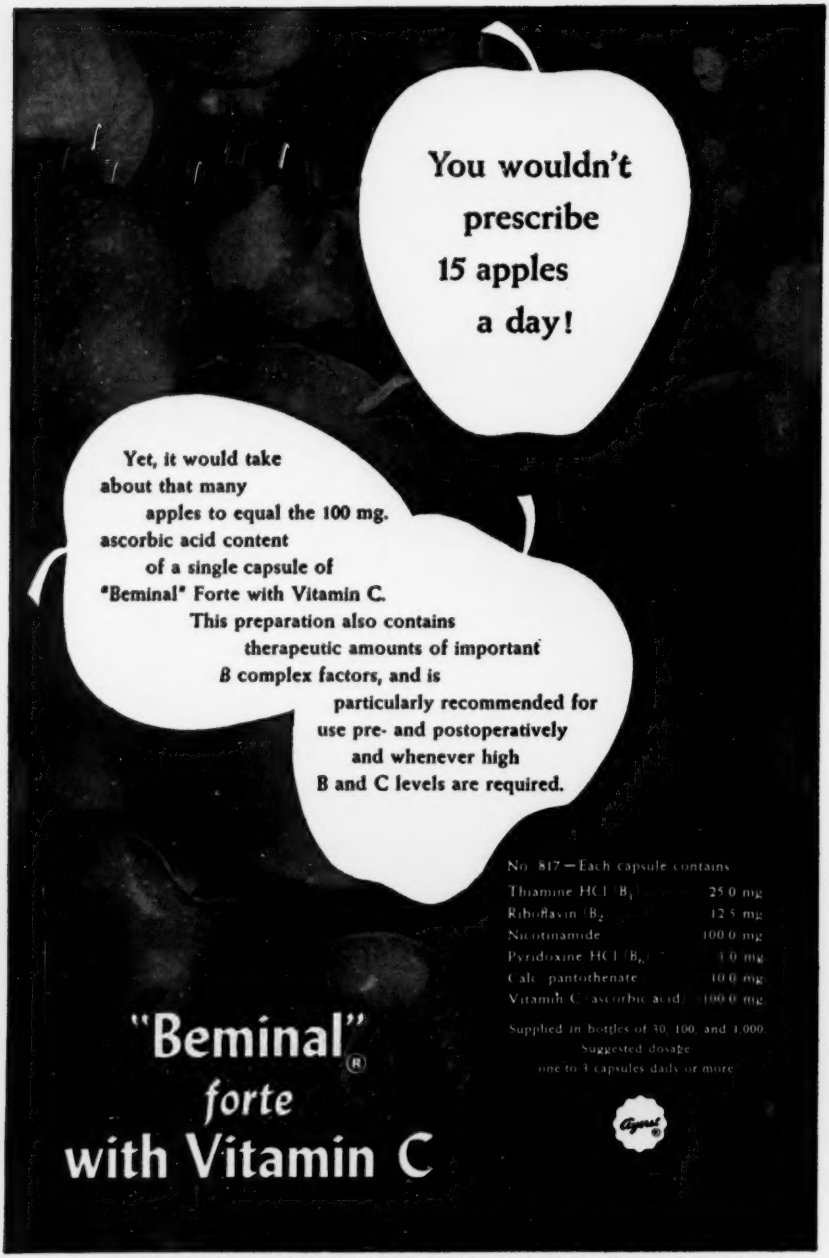
NOTE: These bulletins are designed to help disseminate modern pediatrics knowledge to the general medical profession and will appear monthly in Modern Medicine.

questions, which won't be completed until fall. One problem is whether to allow a wider deduction range for medical costs, now limited to the amount in excess of 5% of net income.

¶ By the time the doctor draft extension act was passed it had little resemblance to the bill offered by Defense Department. The Department's spokesmen told committees they favored the bill in general and then proceeded to find fault with all major provisions. Neither committees nor Congress nor Senate, however, agreed with the department. The final bill was close to what professional associations had proposed in the first place.

¶ World Health Organization officials are hoping that the new conciliation policy of Russia and her satellites will flow over into the health field; since 1950 none of the Iron Curtain countries has paid its WHO assessment, although some have accepted benefits. With the United States tightening its purse strings, WHO faces trouble next year.

¶ Opposition of American Pharmaceutical Association slowed up passage of a law authorizing Food and Drug agents to inspect factories after giving written notice. APA had objected to an FDA interpretation of the proposed law under which its men could inspect pharmacies as well as food and drug plants.



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MODERN MEDICINE
THE JOURNAL OF DIAGNOSIS AND TREATMENT

THE EDITOR'S PAGE

by WALTER C. ALVAREZ, *Editor-in-Chief*

Results of Useless Operation on a Hypochondriac

An able, pleasant, healthy looking, and energetic executive, about 60, had always been a pathologic worrier and a taker of many medicines. Many years ago he had a little fibrositis. Films of his teeth showed none to be devitalized, but he had them all out anyway! This was typical of his attitude toward health—anything was to be sacrificed in order to protect that.

A year before I saw him, he felt some vague fleeting pains in the right side of his chest and the right lower quadrant of his abdomen. Accordingly, on his return home, he had a thorough examination. Although this did not reveal anything wrong, he asked for an appendectomy. He said that he traveled a good deal and did not want to have his appendix burst while he was on a train some night.

That it isn't always wise to perform a needless operation on a hypochondriac was well demonstrated by what happened in the next six months. The removal of the appendix was followed by a chain of operations and bad reactions which more than once nearly killed the fellow.

First, the wound broke open and had to be sewed up again. Naturally, after this, the man had an incisional hernia, which had to be repaired. During this third operation, while some adhesions were being separated, a segment of small bowel was damaged so badly that it had to be resected. Again the wound broke open and had to be sewed up once more. Then he had an incisional hernia, and this had to be repaired.

While convalescing from the third operation, the man got phlebitis with a pulmonary infarct which nearly ended his life.

Later, during treatment of the phlebitis, he was given heparin. Apparently, the patient was markedly allergic to this because he went into shock and almost expired. This series of adventures left him in a nervous state with even greater anxiety over his health than before.

Abuse of Blood Transfusions

Recently, Bernard Strauss and Jose Torres of New York pointed out that much blood is being wasted in ill-advised and apparently needless transfusions. It is doubtful if extra blood injected will ever have a tonic effect on a neurotic person, and there certainly is little sense in giving transfusions to a person who is dying with cancer or uremia.

Every internist sees persons who have received transfusions for very slight degrees of anemia. In some cases the blood was given mainly to cheer the family and to make the relatives feel that desperate efforts were being made to save their loved one.

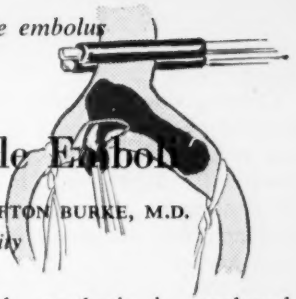
A review of the records of 290 patients who received transfusions indicated that 11 probably didn't need the blood at all, and 38 almost certainly didn't. Hence 13% of the transfusions were ill advised. Interestingly, 12 transfusions were given to patients with red blood cell counts between 4.5 and 5 million. And 7 transfusions were given without any previous study of the blood!

We all know that a transfusion should not be given thoughtlessly because it carries the danger of a possibly serious hepatitis. In one series of cases, hepatitis was transmitted once in every 222 transfusions, and in Strauss's series there were 3 in 290, or 1%. Some transfusers feel that this incidence is abnormally high but, still, all must agree that certainly no person should ever be submitted to the danger of transfusion hepatitis unless he greatly needs the blood.

Myasthenia Gravis

Physicians treating patients with myasthenia gravis will be interested in a report by Drs. Lloyd Gregory, Jr., E. D. Futch, and C. T. Stone to the effect that octamethyl pyrophosphoramide, a new anticholinergic drug, worked better in their hands than did neostigmine in controlling the disease. It was not a cure, as shown by the fact that several of the persons later had crises and died.

An integrated surgical program to meet the catastrophe of saddle embolus improves prognosis.



Treatment of Aortic Saddle Emboli

JERE W. LORD, JR., M.D., AND GRAFTON BURKE, M.D.
New York University, New York City

THE management of a saddle embolus of the lower abdominal aorta must include not only early operative removal of the clot, but also long-term therapy of the initiating cause.

The most common cause of a saddle embolus is a thrombus formed in the auricle of a fibrillating heart. The fibrillation is usually associated with mitral stenosis from an old rheumatic infection, but may be found with hyperthyroidism or, rarely, arteriosclerotic heart disease.

The second most frequent source is a thrombus on the left ventricular wall after coronary occlusion and myocardial infarction. Infrequently, a large embolus may be cast off from an aortic or arteriosclerotic aortic plaque.

Severe lower abdominal, low back, and gluteal pain and numbness and paralysis of the legs are early symptoms. Pulsation is absent in the lower extremities, and anesthesia, coldness, and pallor, with or without cyanosis, are noted below the knees.

After prompt and accurate diagnosis, Jere W. Lord, Jr., M.D., and Grafton Burke, M.D., remove the embolus, preferably within eight hours of the onset.

Spinal anesthesia is employed. Through a left midrectus incision, the posterior peritoneum is incised over the terminal aorta. Double turns of umbilical tape are made around the common iliac arteries and the lower aorta, and a Blakemore rubber-shod clamp is placed, unclamped, across the aorta.

A small arteriotomy is made in the proximal right common iliac artery and any embolus is extruded, also any propagated thrombus from the distal right iliac artery. If necessary, retrograde milking of the external and common iliac arteries is done to obtain free bleeding.

The tape on the right artery is then tightened, and any clot in the left common iliac artery is removed with a right angle clamp and by milking the vessel. After the left tape is tightened, the proximal portion of the embolus in the aorta is removed. The clamp is closed as bleeding begins.

The iliac arteries are then allowed to back bleed, the tapes are again tightened, and the arteriotomy is closed with a continuous everting mattress suture of fine braided silk. All constriction is released, and 100 mg. of heparin is injected into the distal aorta. The

The comprehensive surgical management of aortic saddle emboli. Surgery 33:294-300, 1953.

posterior peritoneum is carefully closed.

Clotting time is determined immediately postoperatively and heparin is administered by either intermittent subcutaneous injections or continuous intravenous drip. Clotting times are measured every three to four hours. Tromexan or dicumarol is started the next day, and heparin is discontinued in forty-eight hours if the prothrombin time is in the therapeutic range. Postoperative heparinization may occasionally be omitted for twenty-four hours when Depo-Heparin has been given preoperatively.

After recovery, studies are made to ascertain measures to correct the cardiac lesion responsible for the embolus. Cardiac catheterization may be employed to determine the possible value of cardiac surgery. Auricular appendectomy should be considered for auricular fibrillation, and mitral commissurotomy for mitral stenosis. When the embolus arises from a mural thrombus secondary to myocardial infarction, anticoagulant therapy is continued for life.

Since the immediate mortality is at least 75% when conservative management is used and recurrent embolism is frequent, a carefully integrated program is needed.

Acute Early Pulmonary Embolism

HARRY A. DAVIS, M.D.

SHOCK, hypotension, or relative hypotension precedes nearly all early episodes of postoperative pulmonary embolism, finds Harry A. Davis, M.D., of the College of Medical Evangelists, Los Angeles. Thromboembolisms occurring in the lung within forty-eight hours after an operation, accidental injury, or hemorrhage have an extremely rapid course and a high incidence of massive embolic occlusion of the main pulmonary artery.

The incidence of massive pulmonary embolism is much greater for individuals with early thromboembolism, probably because sufficient time does not elapse for the long clot to become firmly attached to a peripheral vein wall.

The patients are usually at least 50 years of age. The incidence is higher in elderly persons because of the difficulty in reestablishing normal blood flow after hypotension and also because of the more frequent saccular dilatation of the veins with age.

Most of the emboli originate in the leg veins, since the venous pathways are longer, develop a larger cross-sectional area with age, and usually have more severe and prolonged vasoconstriction.

Studies in thrombo-embolic disease: 1. acute early pulmonary embolism (within forty-eight hours) following surgical operation, trauma, and hemorrhage. Ann. Surg. 137:356-360, 1953.

Reflux of stomach contents and postgastrectomy syndrome prevented by use of a modified operation.

Lesions of Esophagogastric Junction

WILLIAM A. BARNES, M.D.
Cornell University, New York City

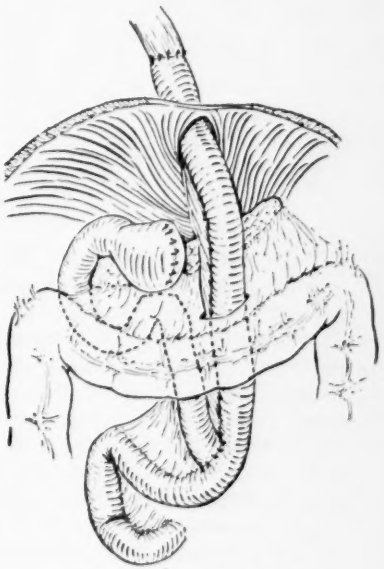
ROSS S. MC ELWEE, M.D.
Charlotte, N. C.

BENIGN stenosing lesions at the junction of the lower esophagus and the gastric cardia may be corrected by resection of the distal esophagus and proximal stomach together with a Roux-Y esophagojejunostomy.

Peptic ulcer, hiatus hernia, or cardiospasm with severe esophagitis produces an obstruction of the lower esophagus that is difficult to manage. Medical therapy offers temporary relief but does not remove the obstruction. Mechanical dilatation is dangerous and unsatisfactory. Since the differential diagnosis between carcinoma and nonmalignant lesions in the area may not be possible before, or even during operation, the involved region should be resected.

Subtotal gastrectomy or vagotomy reduces the gastric acidity and diminishes the effect of gastric reflux into the esophagus, but the stenosis frequently persists and the diseased segment is not removed. Esophagitis may continue despite resection of the area and esophagogastrostomy or cardioplastic operations. Lower esophageal and upper gastric resection with esophagoantrostomy may not be possible, since the process can involve quite a length of the esophagus. Total gastrectomy with distal esophagectomy and esophagojejunostomy can produce profound digestive disturbances.

Resection of the distal esophagus and proximal three-quarters of the



Resection completed

Surgical treatment of non-neoplastic lesions at the esophago-gastric junction. Ann. Surg. 137:523-529, 1953.

stomach with a Roux-Y esophagojejunostomy (see illustration) will remove the stenotic segment, prevent or greatly decrease gastric reflux, and preserve a portion of the stomach, state William A. Barnes, M.D., and Ross S. McElwee, M.D.

Through a left thoracoabdominal incision, the eighth rib is resected and the seventh is divided posteriorly. The phrenic nerve is crushed and any herniated portion of the stomach is visualized.

After the diaphragm is divided, the stomach is transected between Payr clamps. Closure of the residual gastric pouch is achieved in 2 layers with chromic catgut and silk. The esophagus is freed proximally almost to the aortic arch.

A rent is made in the transverse mesocolon, and a loop of jejunum is isolated, approximately 25 cm. from the ligament of Treitz. The jejunum is divided as is the mesentery for several centimeters to allow the distal limb of the jejunum to reach high on the esophagus.

The distal jejunum is passed through the mesocolon and a 2-layer silk anastomosis is made between the esophagus and jejunum. A nasal tube is passed across the anastomosis after the posterior half of the suture line is completed. An end-to-side anastomosis is then made between the proximal and distal jejunal limbs, approximately 20 cm. from the esophagojejunal anastomosis.

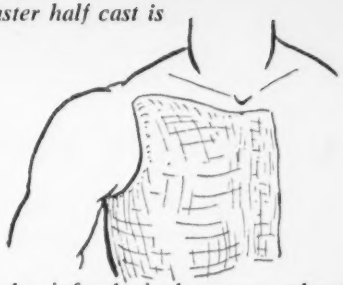
The diaphragmatic opening is closed about the jejunum and a large rubber drainage tube is put into the chest through the tenth interspace. The wound is closed with interrupted silk sutures.

Retention of gastric secretions from section of the vagus nerves can be avoided by pyloroplasty or by resecting the proximal three-quarters or more of the stomach. Slight gastric reflux into the esophagus may still occur but little or no damage ensues when the gastric juice is mixed with bile and pancreatic juice.

¶ CARCINOMA OF THE COLON involving the urinary bladder may cause inflammatory reaction without malignant invasion of the viscus. Edmund R. Taylor, M.D., Malcolm B. Dockerty, M.D., and Claude F. Dixon, M.D., of Rochester, Minn., find that the sigmoid flexure was the intestinal segment concerned in virtually all the 59 patients observed at the Mayo Clinic. Carcinoma was found in about one-third of the bladder resections. Among the latter group, lymph nodes were affected in 57.4%, the involvement increasing to 70% when the neoplasm was demonstrable in the bladder wall. Metastasis to the liver was suspected in 5.1% of the 59 cases, and venous invasion was proved in 1. The resectability rate is about 75%. The prognosis for five-year survival was 33.3% for the entire group; the three-year rate for patients without bladder invasion was 57.1%, but only 38.5% with such invasion.

Surg., Gynec. & Obst. 96:193-199, 1953.

One-stage thoracoplasty may be employed more often if a plaster half cast is applied to the chest.



Adhesive Hemicast

W. G. TRAPP, M.D.
Vancouver

USE of a half cast to the chest wall may permit the performance of thoracoplasty in one stage, since the cast controls the paradoxic respiration that occasionally complicates the operation.

W. G. Trapp, M.D., reports that when an adhesive hemicast is employed, sputa is adequately cleared, wound healing is good, and the collapse appears more complete than when done by the multistage procedure.

Moreover, the patient is spared a second operation and also two and one-half months of hospitalization.

The first 3 ribs are removed as usual, and the desired number of additional ribs are then taken serially with the transverse processes. The wound is closed in layers, using Dermol for the skin. Whitehead's varnish is applied to the incision, which is then covered with a strip of 1-in. gauze. This is painted with Mastisol and covered with a strip of 2-in. gauze.

The entire chest is then painted with tincture of benzoin and wrapped with Elastoplast, without tension. Next, 6-in. plaster bandages are applied to the chest over the operative site, keeping the plaster low in the axilla and high in the infraclavicular area, where paradoxic respiration is ordinarily most pronounced.

The plaster must be rubbed well into the adhesive for good anchorage and should extend from the spine posteriorly to the opposite side of the sternum anteriorly.

Usually 3 bandages, 6-in. each, are adequate. Edges of the hemicast are kept thin to allow a small amount of give during breathing. The cast should be thickest in the infraclavicular and axillary areas.

Pressure is applied with the hands to keep the collapse as great as possible while the plaster is setting. The shoulder and clavicle are kept sufficiently free of plaster to prevent fixation of the scapula to the chest wall.

As with stayed thoracoplasties, streptomycin should probably be routinely used.

After ten days the plaster may be removed and the chest wall will have stiffened enough so that an ordinary chest binder is sufficient.

Shoulder function has been well maintained in all cases. The cast is easily adaptable to any build.

Postoperative collection of pleural fluid is handled easily by needle aspiration through a hole cut in the cast posteriorly.

One stage thoracoplasty using an adhesive hemicast. Dis. of Chest 23:428-438, 1953.

Devices which help the invalid attain self-sufficiency contribute importantly to his rehabilitation.

Apparatus to Assist Quadriplegics

LESLIE BLAU, M.D., AND JOSEPH PHILLIPS
Veterans Administration Center, Wadsworth, Kan.

DONALD L. ROSE, M.D.
University of Kansas, Kansas City

BY means of an easily constructed counterbalanced backrest, the quadriplegic patient can raise himself from the recumbent to the sitting position in bed without help.

No more pulling strength is required than is normally possessed in the little finger—about 5 lb. The traction force can be transmitted by any of the muscle groups of the upper extremity.

The apparatus described by Leslie Blau, M.D., Joseph Phillips, and Donald L. Rose, M.D., can be made in about six hours and mounted on any hospital bed. Total cost of materials is about $15.

The device has four major parts: [1] overhead pipe frame, [2] pulleys, [3] counterbalance and counterweight, and [4] notched bar.

The overhead frame is made of standard 1-in. pipe and fittings:

1 horizontal pipe, 7 ft. long, threaded at both ends
2 vertical pipes, 4 ft. long, threaded at one end
1 horizontal extension pipe, 9 in. long, threaded at one end
1 standard pipe T-fitting
1 standard pipe elbow fitting
4 U-type pipe clamps, ¼ in.
1 stud, ¼ in. by 1½ in., cold rolled steel, threaded at one end.

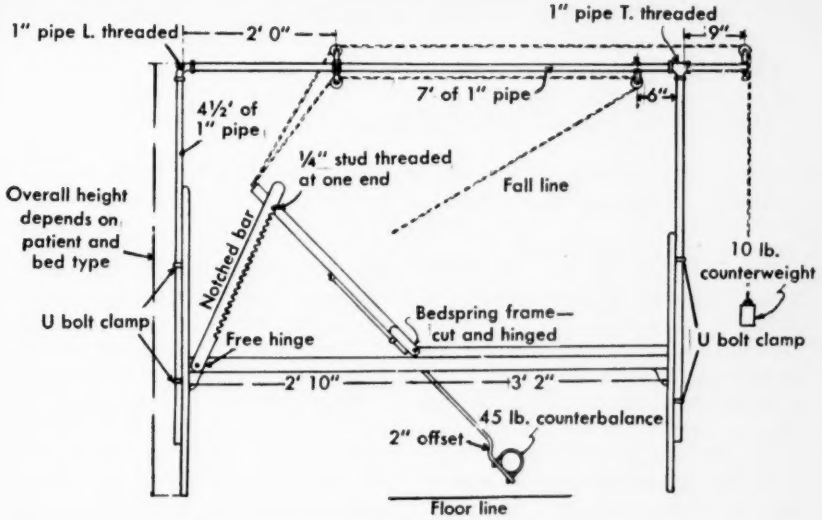
One vertical pipe is joined to the horizontal pipe at the headboard with the elbow fitting and the other at the footboard with the T-fitting. The vertical pipes are clamped to the head and foot of the bed with the U-type clamps. The 9-in. horizontal extension pipe is threaded into the open end of the T-fitting, allowing for attachment of the counterweight pulley.

The 4 traction pulleys, 3-in. standard, are attached as indicated on the diagram: 1 up and 1 down, 2 ft. in from the headboard vertical pipe; 1 down, 6 in. from the foot of the bed; and 1 up at the end of the horizontal extension pipe.

A piece of ⅜-in. sash cord is secured to the center of the head end of the hinged bedspring frame and threaded over the 2 upright pulleys to the counterweight. A similar sash cord is secured at the same place, threaded over the 2 downward pulleys, and forms a fall line, which the patient grasps.

The 45-lb. counterbalance is attached to a steel bar ½ by 2 by 36 in. The bar has a 2-in. offset, 8 in. from the point of attachment to the counterbalance, to allow for

Assistive devices in achieving self-sufficiency. Arch. Phys. Med. & Rehab. 34:82-85, 1953.



Schematic side view of device attached to hospital bed

clearance of the weight bulk when the bedsprings are in a horizontal position. This assembly is bolted at the center of the hinged end of the bedspring frame, with a free overhang of 18 in. at the weighted end.

A 10-lb. counterweight is drilled and tapped for a ¼-in. metal eyebolt by which the sashcord is attached.

An aluminum bar, ½ by 2 by 26 in., is notched every 2 in. Thus the bedspring frame will slide freely over the indentations on any upward motion of the hinged section but will prevent any downward motion of more than 2 in. The aluminum bar is attached to the main bed frame on a free hinge and may be moved to and fro in the upward and downward motion of the hinged section of the bed.

¶ ORAL PENICILLIN is equally effective whether administered to children at twelve- or at four-hour intervals if the total daily amounts are the same. Nancy N. Huang, M.D., and Robert H. High, M.D., of Temple University and St. Christopher's Hospital for Children, Philadelphia, find that therapeutic results are equivalent with a dose of 300,000 units twice a day or with 200,000 units initially followed by 100,000 units every four hours. Effectiveness of potassium penicillin G or procaine penicillin is comparable on either schedule.

J. Pediat. 42:532-536, 1953.

Enlarged liver and eosinophilia characterize a syndrome believed caused by invasion by nematode larvae.

Eosinophilia-Hepatomegaly Syndrome

CONN L. MILBURN, JR., M.D., AND KENNETH F. ERNST, M.D.
Letterman Army Hospital, San Francisco

INVASION of the liver and other viscera by nematode larvae is apparently the cause of a recently recognized syndrome among infants and children.

The prominent features of this disease are chronic eosinophilia, hepatomegaly, eosinophilic infiltrative and granulomatous lesions in the liver, and a benign course. Col. Conn L. Milburn, Jr., M.C., and Col. Kenneth F. Ernst, M.C., U. S. A. report a case caused by an unidentified nematode larva, probably *Toxocara canis,* and review 15 other reported instances of the syndrome.

Hematologic studies show persistent hyperleukocytosis with moderate to severe eosinophilia. The hemoglobin level and sedimentation rate are variable. Bone marrow studies reveal only eosinophilic hyperplasia. Slight to moderate increase in the globulin fraction of the plasma protein is almost a constant finding. Total proteins are normal or augmented. The albumin-globulin ratio is usually reversed because of an increase in globulin.

Liver function is usually not impaired. Any disturbance that does occur is slight. Jaundice or ascites has not been noted. The liver varies in size but is usually a little or moderately enlarged, smooth and not tender. Associated splenic enlargement is sometimes found.

The syndrome is believed to result from localized antigen-hypergic tissue reactions. Migrations in the liver and other viscera by nematode larvae are probably the exciting antigenic agents in every case. Larvae can easily be unnoticed in liver sections because the agents are found only after prolonged detailed search with the use of special technics.

Microscopic sections also show focal necrosis, granulomas with epithelioid cells, histiocytes, giant cells, and widespread eosinophilic infiltration. When laparotomy is done to obtain liver biopsies, the liver is observed to be large and the surface studded with a number of irregularly shaped white or gray plaques, sometimes up to 8 mm. in size. Variations occur from case to case, suggesting differences in the duration and severity of the process. Even calcification may be seen.

Patients are 15 to 38 months at onset. The restriction to this age distribution may be explained by

Eosinophilia-hepatomegaly syndrome of infants and young children. Pediatrics 11:358-367, 1953.

the greater exposure to infestations through dirt-eating and increased hand-to-mouth activity. The relative sizes of the larvae passing through the liver may also be important. The small hepatic capillary beds of infants arrest the larvae in the liver, whereas large adult capillary beds allow the small larvae to pass through the liver and get to the lungs.

The course is benign and the prognosis good. Most cases are completely asymptomatic. In others, the symptomatology is incident to a slight to moderate pneumonitis, consisting of recurrent attacks of fever, cough, and parenchymal infiltration observed on chest roentgenograms. The patients are never acutely ill and have no symptoms between the bouts of respiratory disorders.

The disease appears to be self-limited, but long lasting. Eosinophilia may not completely disappear even after three years. Meanwhile the patients grow and develop normally.

Specific therapy does not seem necessary. Treatment with various vermicidal agents and cortisone has not appreciably altered the course of the disease.

Teaching Infants to Walk

MAURICE H. HERZMARK, M.D.

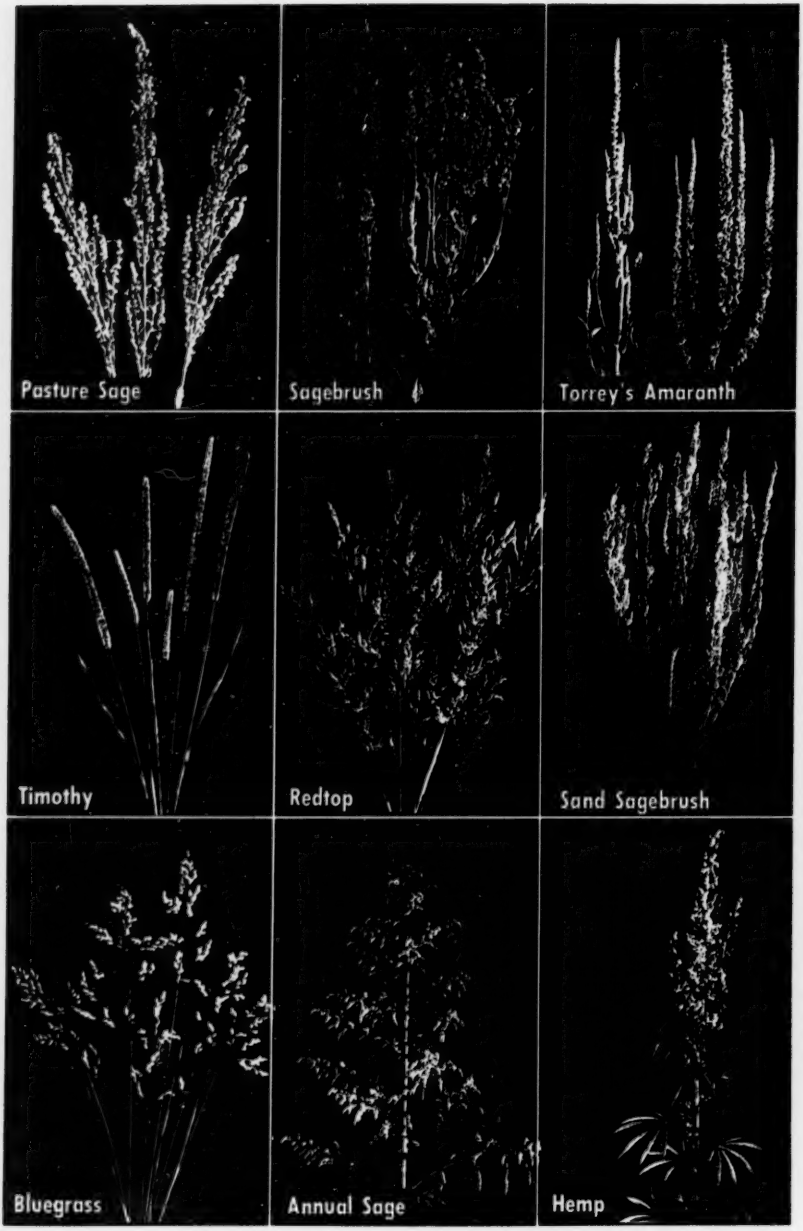
A PAD that simulates the ground may be used in the baby's play pen to strengthen leg and foot muscles.

The American Indian's graceful intoeing gait is the result of a normal physiologic response to rough terrain. Urban infants learn to walk on flat smooth surfaces that do not develop the intrinsic leg and foot muscles. When the baby first stands, the legs are weak. If the ground surface is smooth, the child separates the feet and turns them out to get as broad a base as possible. This throws the weight on the longitudinal arches, everts the heels, and thrusts the heads of the astragali medially. Flat, pronated, weak feet result.

The habits of standing and walking acquired in infancy may last for life. Infants able to develop foot and leg muscles according to physiologic principles will have strong, well-balanced feet.

Maurice H. Herzmark, M.D., of the Veterans Administration, Washington, D. C., describes a pad for the play pen which simulates the ground. The pad is made of sponge rubber with knobs. The knobs are ¼ in. high with diameters of 1¼ in. at the base and are staggered ⅝ in. apart. When the baby's foot touches the knobs, the toes make reflex grasping movements; the foot cannot pronate but tends to invert.

Teaching infants to walk: physiological considerations. J. Pediat. 42:429-431, 1953.

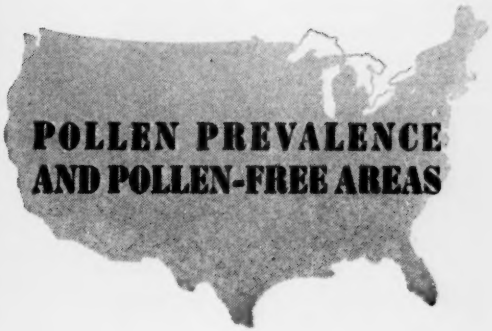

Pasture Sage
Sagebrush
Torrey's Amaranth
Timothy
Redtop
Sand Sagebrush
Bluegrass
Annual Sage
Hemp

Southern Ragweed

Western Ragweed

Giant Ragweed

SPECIAL EXHIBIT



Adapted from a presentation made at the Chicago convention of the American Medical Association by Oren C. Durham, Ph. D., Chairman, Pollen Survey Committee, Council on Aeroallergens of the American Academy of Allergy; Chief Botanist, Abbott Laboratories; Assistant Professor, Lecturer in Allergy, University of Ill.

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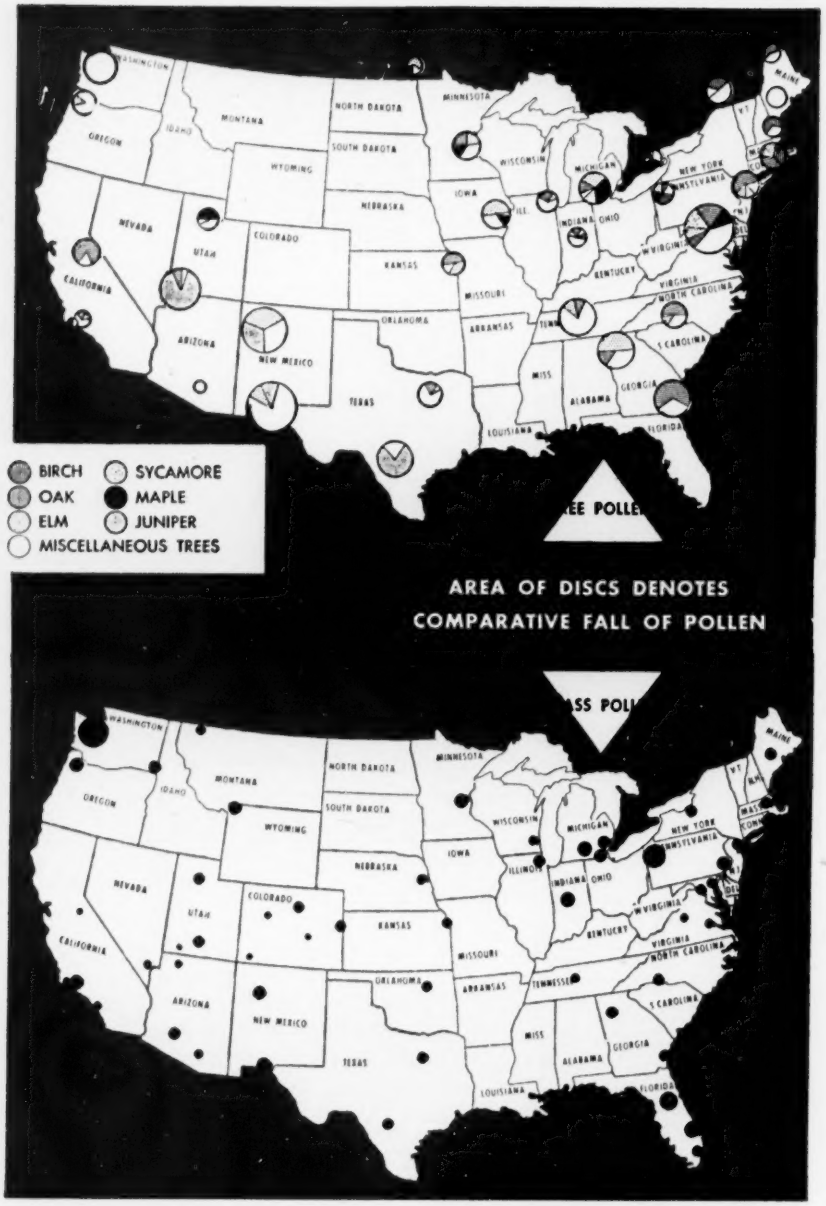


Prevalence and Comparative Annual Incidence of Pollens

The essential objective in atmospheric pollen research is to learn how much of what kinds of allergenic pollen is likely to be inhaled by sensitized persons at any time in any locality.

Data on time of onset and termination of the pollen seasons in many different localities are necessary in comparing the skin reactions and histories of pollen-sensitive persons who have resided in more than one area. Such information is also helpful in evaluating the effect of treatment.

TREE POLLENS

As a group, the tree pollens, although less toxic than those of weeds and grasses, are mostly a headache to the physician. Pollens of pines, firs, spruces, hemlocks, and deodar cedar are so inactive that they are largely ignored. Of the conifers, only the juniper pollens and morphologically similar types, such as incense cedar, are active. Even broad-leaved trees which produce pollen in large amounts account for only occasional severe sensitization. However, in many localities the list of potential offenders is long. Another difficulty is the irregularity of the seasons of tree pollination. Therefore the tree pollen records given are not necessarily typical.

GRASS POLLENS

The grass pollen map, too, is an experiment and a risk as far as interpretation is concerned. The wild grasses shed very little pollen and the acreage of freely pollinating cultivated grasses is comparatively small. Grass pollen grains are relatively heavy and are not as readily dispersed in the air as are the lighter pollens such as ragweed.

RAGWEED POLLEN

Incidence of ragweed pollen and of the pollens of ragweed-related species is shown on the same map. Most persons sensitive to ragweed are also sensitive to the sages. The seasons vary with the latitude.

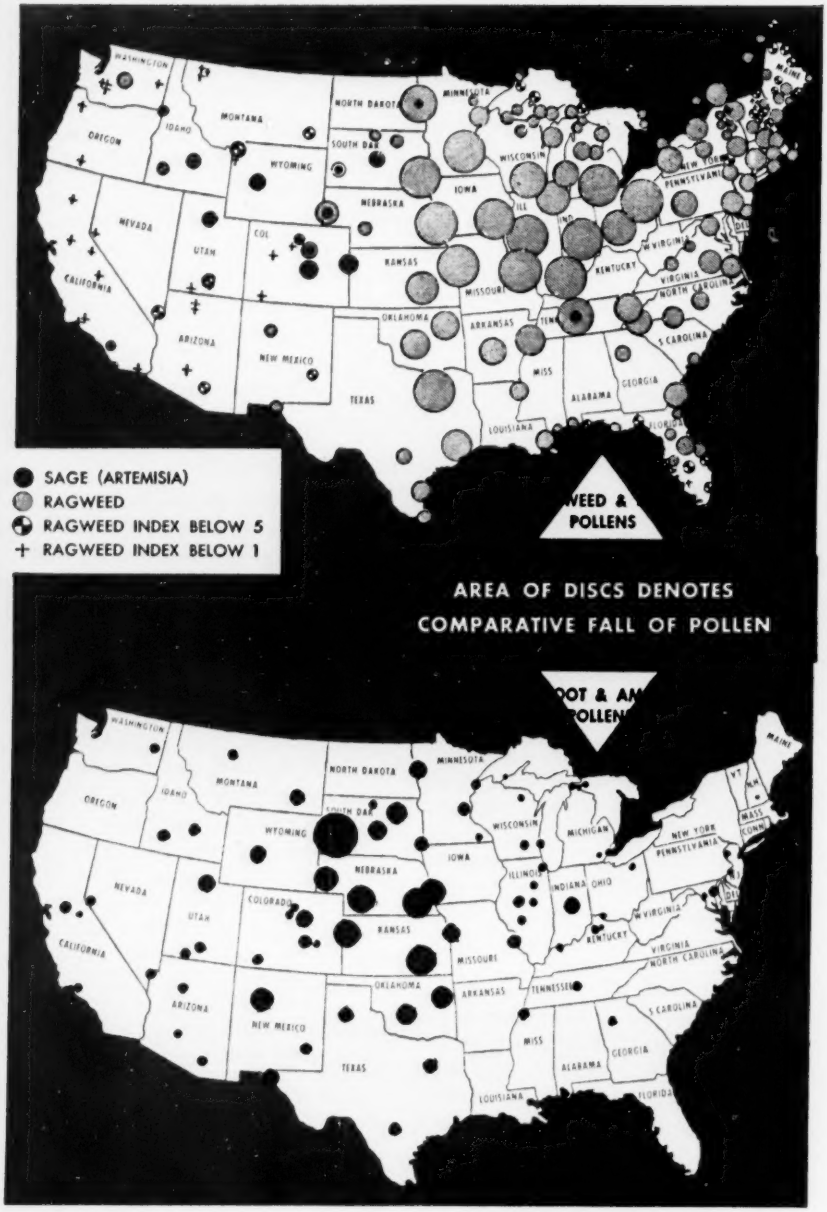
Extensive routine aerobiological studies have shown, for example, that the ragweed hay fever season is appreciably later at Little Rock than at Winnipeg or Chicago.

In the southern half of Florida, slight exposure is possible over a period of six months. Two distinct ragweed seasons occur each year in the spring and the fall in Arizona and southern California, caused by two different types of false ragweed.

THE GOOSEFOOT AND AMARANTH POLLENS

The principal hay fever offenders in the goosefoot (chenopod) family are the tumbleweeds: Russian thistle and firebrush or fireweed. In the amaranth family the

SPECIAL EXHIBIT



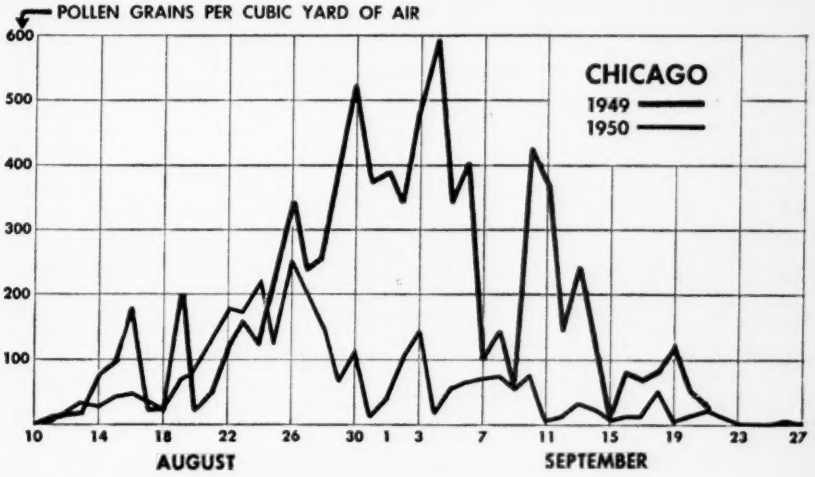
chief sources of air pollution are Palmer's amaranth and the less active western water hemp.

Microscopic appearance and antigenic qualities of the goosefoot and amaranth pollens are nearly identical. These are often reported as a group rather than separately.

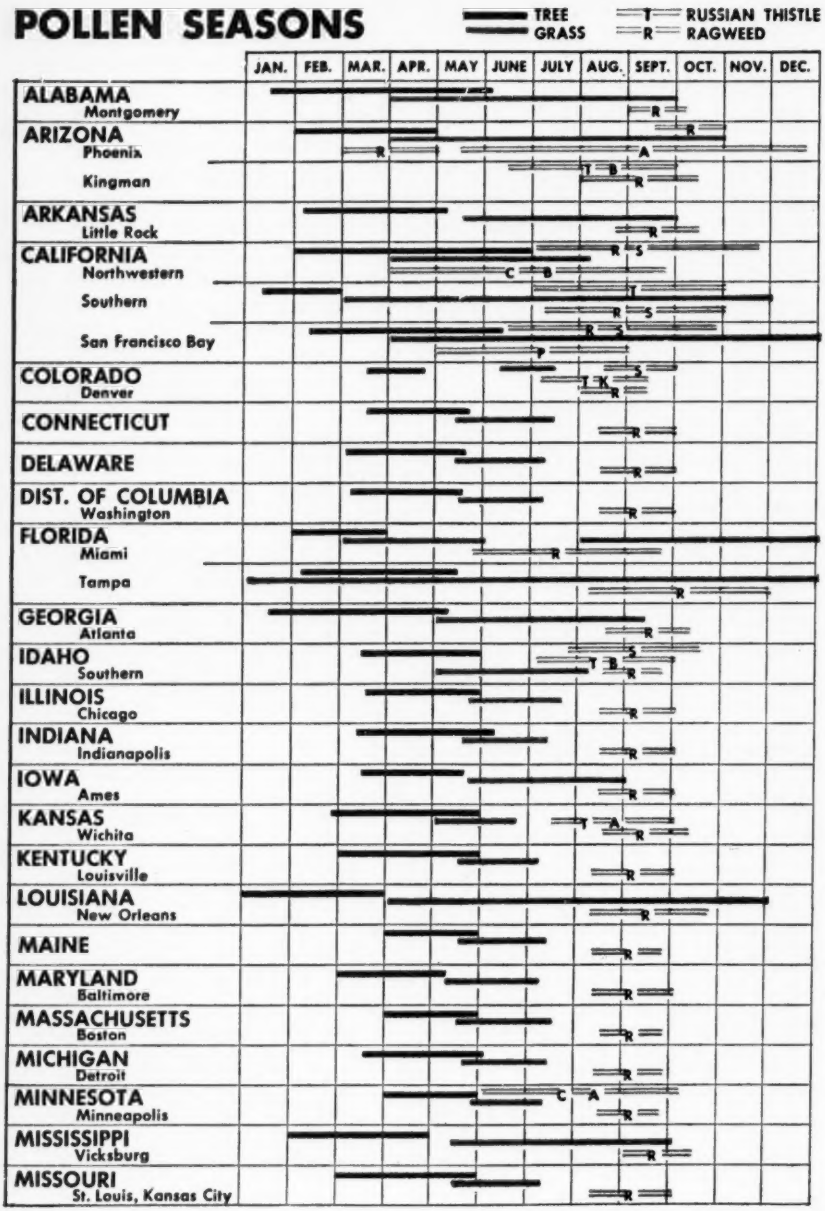
Pigweed and lamb's-quarters are very common weeds throughout North America, but their pollen output is too small for clinical consideration.

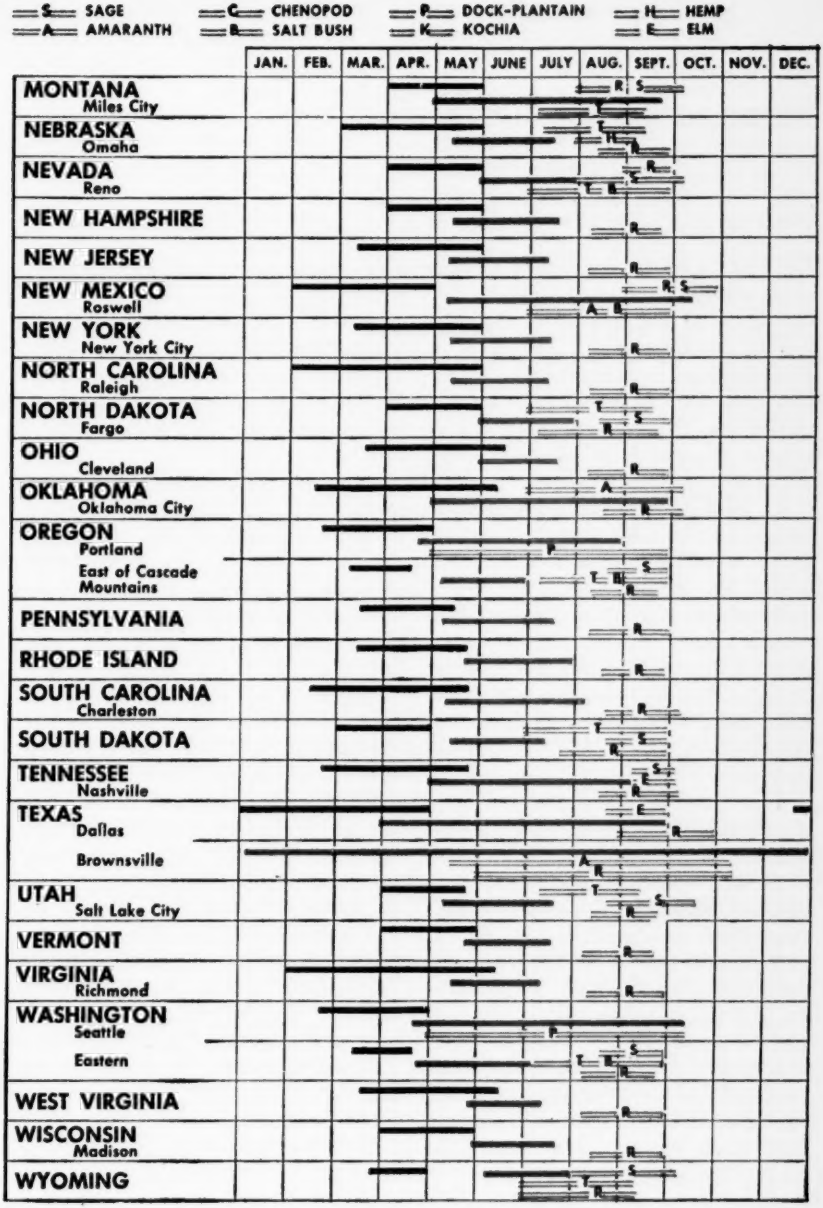
DAILY POLLEN RECORDS

The clinical usefulness of daily ragweed pollen records is emphasized by the Chicago figures for 1949 and 1950 shown in the graph below. For nine consecutive days during late August and early September 1949, the ragweed pollen concentration remained at a very high level—400 to 500 pollen grains per cubic yard of air. If, during that period, the results in treatment of local cases of hay fever were not perfect, everyone could be sure of the explanation. In 1950 it was just as important to know why pollen treatment and supplementary medication during the same part of the season seemed unusually effective. Instead of abnormally high concentrations as in 1949, the figures for the 1950 season fell to all-time low levels, not only for those same nine days but for the remainder of the season as well. In seeking an explanation for the shortage of wind-blown pollen after Aug. 26, 1950, researchers first noted that the short and giant ragweed crops were as luxuriant as usual. But weather records showed that except for one day in four weeks the wind had blown continuously from the north sector. In Chicago, cool north winds always retard pollen production or discourage pollen distribution, or both. The three days of low concentration in early September 1945 were also caused by north winds.



POLLEN SEASONS




S SAGE
A AMARANTH
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P DOCK-PLANTAIN
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NEW HAMPSHIRE
NEW JERSEY
NEW MEXICO
Roswell
NEW YORK
New York City
NORTH CAROLINA
Raleigh
NORTH DAKOTA
Fargo
OHIO
Cleveland
OKLAHOMA
Oklahoma City
OREGON
Portland
East of Cascade Mountains
PENNSYLVANIA
RHODE ISLAND
SOUTH CAROLINA
Charleston
SOUTH DAKOTA
TENNESSEE
Nashville
TEXAS
Dallas
Brownsville
UTAH
Salt Lake City
VERMONT
VIRGINIA
Richmond
WASHINGTON
Seattle
Eastern
WEST VIRGINIA
WISCONSIN
Madison
WYOMING

Adequate treatment of acute syphilis in most cases will practically eliminate late manifestations.

Management of Syphilis

R. H. KAMPMEIER, M.D.
Vanderbilt University, Nashville

THE decrease in the incidence of acute syphilis and of the late manifestations of the disease is the result of a combination of factors. The effects of recent penicillin therapy and the arduous case finding and follow-up care and metal therapy in the past are all becoming noticeable.

R. H. Kampmeier, M.D., states that with adequate penicillin treatment, a biologic cure can be obtained in either seronegative or seropositive primary syphilis and a relapse rate of no higher than about 5% can be procured in secondary syphilis. A biologic cure will insure the patient against the complications of syphilitic aortitis and neurosyphilis.

The incidence of syphilis is being further reduced by treating patients who have gonorrhea with penicillin doses in excess of the amount necessary to eliminate the gonorrhea, so that syphilis acquired with gonorrhea is also cured. As little as 1,200,000 units of penicillin in 1 injection can cure a patient with a seronegative chancre.

Effective treatment should reduce the reservoir of infectious syphilis, the chief source of future infection then being the 5% who have secondary syphilis in relapse. Persons with reinfection constitute another source of infectious syphilis, since a biologic cure now occurs in such a short period that immunity does not develop. Case finding and careful follow-up must be continued to help reduce the reservoir of infection.

In cases of neurosyphilis, the spinal fluid findings may be used as an indication of the results of therapy. Penicillin is as effective in acute meningeal syphilis as in acute syphilis, and the effects on meningovascular syphilis are excellent.

Spinal fluid findings revert in 60% of cases in tabes dorsalis, but the pathologic changes in the cord are not reversible. Paresis may be treated with penicillin alone. Although penicillin controls neurosyphilis, relapses do occur, and spirochetes have been observed in the brain after therapy. A total of 6,000,000 to 12,000,000 units of penicillin usually controls the inflammatory process in the central nervous system. Careful observation and repeated spinal fluid examination should be done during the five years after therapy to detect reactivation.

The management of cardiovascular syphilis, aortic insufficiency, an-

Comments on the present day management of syphilis. South. M. J. 46:226-237, 1953.

eurysm, and the complications of aortitis remains unsatisfactory, because the pathologic changes are the result of scarring.

The effects of penicillin in late latency await the test of time, although treatment will probably be effective.

Prenatal syphilis has been virtually eliminated by penicillin; congenital syphilis responds well to penicillin in the infectious phase.

Additional knowledge of false-positive serologic reactions has been obtained by mass testing. Some persons who have not had syphilis have positive reactions of the flocculation variety.

False-positive flocculation results are not uncommon with a number of viral diseases, including infectious mononucleosis, viral pneumonia, and vaccinia, or for children with mumps or measles. False-positive reactions are not unusual in the nonsyphilitic protozoan diseases such as malaria and several spirochetal diseases—relapsing fever, rat-bite fever, and spirochetal jaundice—and may be seen with immunologic reactions after booster doses of tetanus toxoid or injection of animal sera. In some chronic diseases, especially if associated with hyperglobulinemia, such as disseminated lupus or sarcoid, false-positive reactions can occur.

In such cases the more highly specific complement-fixation test can be of aid.

Absorption in Ulcerative Colitis

KAHN UYEYAMA, M.D., AND ASSOCIATES

VITAMIN A absorption rates are much reduced in ulcerative colitis. No consistent acceleration of this process is produced by administration of Tween 80, an emulsifying agent, nor is any clinical improvement noted. The abnormally rapid passage of material through the colon does not explain this reduction, since the vitamin A absorption rate is normal in cases of functional hypermotility of the small intestine.

Kahn Uyeyama, M.D., J. E. Giansiracusa, M.D., T. L. Althausen, M.D., and H. A. Harper, Ph.D., of the University of California, San Francisco, and the University of San Francisco find that clinical improvement induced by cortisone or ACTH is usually accompanied by elevation of vitamin A absorption rates, though diarrhea may continue.

Galactose is absorbed at twice the normal rate in cases of ulcerative colitis and at 3 times the usual rate in small intestinal hypermotility. Methionine absorption is moderately reduced in ulcerative colitis, but is not altered by hypermotility.

Alterations of intestinal absorption in ulcerative colitis and in intestinal hypermotility; modification of these alterations in ulcerative colitis by Tween 80, ACTH, and cortisone. Gastroenterology 23:143-154, 1953.

Total dietary fat intake is a significant factor in the high rate of heart disease in the United States.

Diet and Incidence of Heart Disease

ANCEL KEYS, PH.D.
University of Minnesota, Minneapolis

THE relationships between total fat content of the diet, cholesterol concentration of the blood, development of atherosclerosis, and mortality from degenerative heart disease are of major public health importance.

Over the age span of 20 to 70 years, men in the United States have an excess mortality of about 20% compared with the average of other comparable countries. For women, the excess mortality in the United States is from 5 to 10%.

Americans are relatively healthy as infants but unhealthy as adults. Analysis of vital statistics shows a great excess of death in the United States from circulatory diseases. The death rate from degenerative heart disease before old age is 2 to 3 times as high among men as among women. In Italy, for example, the total rate is much lower and the male excess is almost wholly lacking.

Patients with angina pectoris or myocardial infarction, when compared to healthy persons of the same age, tend to have blood sera characterized by high cholesterol and certain liproprotein concentrations, high cholesterol-phospholipid ratios, and larger proportions of the total cholesterol in the beta lipoprotein fraction. Patients with diseases such as diabetes, myxedema, and nephrosis tend to have such serum peculiarities and also have a high incidence of degenerative heart disease. The atherosclerotic artery typically contains abnormal amounts of cholesterol, most of which is probably derived from the blood.

Whenever groups of persons are compared, measurements invariably seem to show statistically significant correlations with the presence or absence of the tendency toward degenerative heart disease. However, these correlations are not high enough to provide useful diagnostic or prognostic tools for dealing with an individual. Results from serum total cholesterol measurements and from ultracentrifugal analysis are quite similar.

All animals, including man, synthesize cholesterol, mainly in the liver, and eliminate the compounds in the bile and by chemical degeneration. Cholesterol in food may be absorbed and so enters the balance picture. Animals vary in response to dietary administration of cholesterol, so attempts to extrapolate to man findings from experi-

Diet and the incidence of heart disease. Bull. Univ. Minn. Hosp. & Minn. M. Found. 24:376-388, 1953.

ments with animals can lead to absurdities.

Ingestion of 10 gm. of cholesterol in a meal suitable to promote absorption leads to only trifling and transient increases of cholesterol in the blood serum. The results of continued daily administration of large amounts in the diet are perhaps more significant.

Different persons have widely divergent habitual dietary intakes of cholesterol. No relationship can be found between the intake and the concentration of serum cholesterol. Men who make large changes in the cholesterol intake without otherwise changing the diet do not show any alteration in the serum cholesterol level.

However, diet can have a profound effect. The rice-fruit diet causes a 20 to 40% decrease in serum cholesterol in one month. The controlling factor is the total fat content of the diet. No significant difference is found between the effects of animal and vegetable fats. Effect of prolonged or lifelong subsistence on different fat intakes is difficult to determine.

Ancel Keys, Ph.D., who studied serum cholesterol values in subjects from England, Italy, and Spain as well as from Minnesota, finds that levels depend on the total dietary fat. Relative obesity is not a major factor short of real undernutrition. However, increased values are consistently found in men actively gaining in weight from overeating. With simple fasting, the usual tendency for the serum cholesterol to rise may reflect the fact that the fasting man is primarily metabolizing fat.

Data from countries where good public health and vital statistics are maintained indicate a definite correlation between mortality from degenerative heart disease and total dietary fats. During World War II in Norway, with a reduction in dietary fat, a pronounced decline in mortality occurred.

In the past forty years the contribution of fats to the total metabolism in the United States has risen by more than 25%. The biggest contributor to the fats in our diet is fats and oils as such, excluding butter, which comprise 46.5% of the total. Therefore any attempt to reduce the total fat intake must begin with restricting cooking fats and oils.

¶ HERPETIC LESIONS may be benefited by intramuscular administration of massive amounts of vitamin B_{12}. In 4 cases of herpes zoster and 1 of simplex, Gordon B. Leitch, M.D., of Portland, Ore., observed retrogression and healing beginning within thirty-six to forty-eight hours of the first injection. Pain subsided within twenty-four hours, and, with 1 exception, terminal peripheral neuritis was slight. The dosage was 1,000 μg. daily for four days followed by reduced amounts given on alternate days, usually 500 μg. for 2 or 3 doses and 100 μg. for 2 doses thereafter.

Northwest Med. 52:291-292, 1953.

The diagnosis of adrenocortical deficiency is facilitated by a simple and specific water diuresis method.

Diuresis Test for Adrenal Deficiency

S. OLEESKY, M.B.
University of Sheffield, England

DIAGNOSIS of adrenocortical insufficiency, found in such diseases as hypopituitarism and Addison's disease, may be made by a relatively simple diuresis test.

The procedure described by S. Oleesky, M.B., is simpler to perform and less arbitrary than the Kepler test, does not require chemical analysis and so can be done on the ward, and is more specific for adrenal deficiency. Not only is the failure of water diuresis of the adrenal-deficient patient assessed, but also the ability of the adrenal hormone to rectify this defect.

The test is performed as follows:

1] After a night without fluids, the patient drinks as much water as possible up to 1 liter within twenty minutes.

2] The urine flow is measured at intervals of fifteen to twenty minutes for two and one-half hours.

3] The test is repeated at the same time the next day, but 50 to 75 mg. of cortisone is given by mouth four hours before the water is taken.

4] The results are reported as the maximum rate of urine flow after taking a particular volume of water and as the maximum rate after the same volume of water, but influenced by cortisone.

In case of adrenal insufficiency, the maximum rate of urine flow will be less than 2 to 3 cc. per minute and will be restored to normal with cortisone. The urine-flow rate of normal persons can be increased only when cortisone dosages of 200 to 500 mg. a day are given.

The following must be observed:

- The patient's serum sodium level must not be extremely low.
- The dose of cortisone must be at least 50 to 75 mg.
- Both the control diuresis and the diuresis using cortisone must be done at the same time of day. The rate of flow varies with the time of day.
- The water should be taken when the oral cortisone activity is greatest, measured by eosinophil depression; with adrenal deficiency this is about four to eight hours after the cortisone has been taken.

Patients with anorexia nervosa, myxedema, or primary ovarian deficiency excrete normal amounts of water after ingestion of 2 or 3 cc. of water per minute. Hence the first day's test can be used to differentiate such conditions from hypopituitarism or Addison's disease.

The rare salt-losing form of chronic renal disease can be distinguished from adrenal insufficiency by the failure of water diuresis with cortisone, the extremely high blood urea level, and the inability to produce a concentrated urine.

Specific water diuresis test for adrenocortical insufficiency. Lancet 265:769-770, 1953.

In recalcitrant sprue, hormones increase intestinal absorption, weight gain, and sense of well-being.

Cortisone and ACTH for Sprue

HENRY COLCHER, M.D., STANLEY R. DRACHMAN, M.D., AND DAVID ADLERSBERG, M.D.
Mount Sinai Hospital, New York City

ALTHOUGH not curative, cortisone and ACTH are capable of inducing remissions of variable extent in cases of sprue that are refractory to other therapy.

Disappearance of diarrhea, usually after one or two days of hormonal treatment, a sense of well-being, increased appetite, and gain in body weight, especially with prolonged therapy, are evidence of improvement. In some instances, the serum albumin fraction and serum calcium levels are increased, the roentgenologic appearance of the small intestine is bettered, and content of fat in the stools is diminished.

The flat oral glucose tolerance curves are essentially unaltered during or after therapy. The improved reactions in vitamin A tolerance tests and the elevated fasting vitamin A and carotene levels sometimes found suggest an increased, though delayed, absorption of vitamin A and carotene. No hematologic changes are noted.

Repetition of a course of hormone treatment for the same individual results each time in clinical improvement of essentially the same degree, in a similar time interval, and with approximately like dosage. Since relapses occur one to five weeks after the cessation of therapy, maintenance treatment with small amounts of cortisone or ACTH is advised by Henry Colcher, M.D., Stanley R. Drachman, M.D., and David Adlersberg, M.D., for patients with sprue resistant to other measures.

The usual initial dosage is 100 mg. of ACTH, given daily intramuscularly in four divided doses, or 100 mg. of cortisone per day injected intramuscularly in 1 or 2 doses. After improvement is apparent, the amount is gradually reduced by 12.5- to 25-mg. decrements at weekly or biweekly intervals, depending upon the progressive subsidence of symptoms.

At the start of treatment a low-fat, high-protein, high-calorie, 500-mg. sodium diet is prescribed. After smaller amounts of the steroids become adequate, the sodium intake is liberalized. Antianemic preparations, supplementary potassium chloride, and calcium gluconate, as indicated, are also given during administration of the hormones.

Patients are examined at fre-

Management of intractable sprue with cortisone and adrenocorticotropin (ACTH). Ann. Int. Med. 38:554-567, 1953.

quent intervals to detect any untoward effects of hormone treatment. Abscesses occasionally form at the site of injection, probably because of the lowered resistance with sprue. Ammonium chloride is beneficial for the tetany sometimes associated with hypocalcemia, alkalosis, and hypochloremia when calcium alone is insufficient. Mercurial diuretics may be helpful for controlling edema when salt limitations are exceeded.

Effective results were obtained by these measures for 8 patients with primary sprue who were not helped by dietary measures, liver extracts, folic acid, vitamin B_{12} injections, multiple vitamin preparations including vitamin K, calcium, and transfusions. Weight loss, diarrhea, weakness, anorexia, abdominal distention, stomatitis, and glossitis were prominent manifestations in all cases. Because of the need for frequent injections, ACTH was limited to hospitalized patients. After discharge from the hospital, cortisone was used exclusively.

Hepatic Cirrhosis and Prostatic Enlargement

H. H. STUMPF, M.D., AND S. L. WILENS, M.D.

PROSTATIC hypertrophy is less common and begins later in life among men who have portal cirrhosis of the liver.

High estrogen levels or other forms of hormonal imbalance may be responsible, since a damaged liver loses some capacity to neutralize estrogenic material.

H. H. Stumpf, M.D., and S. L. Wilens, M.D., of Bellevue Hospital and New York University, New York City, reviewed autopsies and graded prostates of 333 men with slight to severe hepatic cirrhosis and 359 without. Most of the cirrhotic men were chronic alcoholics. All subjects were at least 50 years old at death.

The total incidence of grossly enlarged prostate is nearly twice as high without cirrhosis, 53% in contrast to 30% with liver disease. Ordinarily, moderate to great enlargement is seen in 30% of elderly men, but severe cirrhosis reduces the proportion to 8%.

Extensive liver involvement apparently postpones onset of hypertrophy, since glands of great size develop in 28% of most men at 50 to 69 years, but in only 6% of the cirrhotic group. At 70 to 79 years the difference is much less.

Cancer of the prostate and of other organs is no less common among cirrhotic than among noncirrhotic individuals, hence the low rate of prostatic hypertrophy with liver involvement is significant.

Inhibitory effects of portal cirrhosis of liver on prostatic enlargement. Arch. Int. Med. 91:304-309, 1953.

Number of staphylococci strains resistant to the most widely used antibiotics seems to be increasing.

Antibiotic-Resistant Staphylococci

MAXWELL FINLAND, M.D., AND THOMAS H. HAIGHT, M.D.
Harvard University and Boston City Hospital, Boston

MANY observers report an increasing incidence of penicillin-resistant staphylococci, especially in hospitals where the antibiotic is widely used. A close correlation apparently exists between penicillin resistance of staphylococci and the ability to produce penicillinase, but no correlation appears between penicillinase production and hemolysis, pigment production, or coagulase activity.

Since the number of strains of staphylococci resistant to penicillin has attained significant proportions only after the use of penicillin on a large scale, Maxwell Finland, M.D., and Thomas H. Haight, M.D., studied 500 strains of staphylococci isolated from patients at the Boston City Hospital with respect to sensitivity to other antibiotics now commonly used.

With some of the agents, notably penicillin, aureomycin, and terramycin, the sensitivity of the organisms varies over a wide range of concentrations, some strains being highly susceptible, while others are highly resistant. The distribution curves for the less effective, less popular, or less widely used agents—streptomycin, neomycin, chloramphenicol, and polymyxin B—are much less variable; the inhibiting concentrations of these agents for most of the strains fall within a relatively narrow range.

On a weight basis, the order of effectiveness against the majority of the strains collected are approximately: [1] erythromycin, [2] aureomycin, [3] terramycin, [4] bacitracin, [5] streptomycin, [6] chloramphenicol, [7] neomycin, [8] polymyxin B, and [9] penicillin. About 20% of the strains, however, are more sensitive to penicillin than to any of the other agents, and for these strains penicillin ranks first.

Only one-fourth of the strains are considered sensitive to penicillin, while about two-thirds are sensitive to aureomycin and a little more than half to terramycin.

No direct correlation exists between the grade of sensitivity of the staphylococci to penicillin, aureomycin, or terramycin and the source from which the bacteria were obtained, except for the larger proportion of resistant organisms found in stool cultures. Striking is the fact that none of the penicillin-sensitive or intermediate strains is resistant to aureomycin and that all the aureomycin-resistant strains are also resistant to penicillin.

Essentially the same relationship is seen between penicillin and ter-

Antibiotic resistance of pathogenic staphylococci. Arch. Int. Med. 91:143-158, 1953.

ramycin. The greater proportion of penicillin-resistant strains are sensitive or intermediate in susceptibility to aureomycin or terramycin. Contrarily, the correlation between sensitivity and resistance to aureomycin and to terramycin is extremely close.

While previous antibiotic therapy of a specific patient may be an important factor in the occurrence of strains resistant to that antibiotic, the widespread use of antibiotics may be of equal or greater importance in the increased incidence of staphylococci resistant to those antibiotics. Apparently such strains become or remain pathogenic and retain resistance when disseminated and acquired by individuals who have not themselves received such antibiotics.

Oral Penicillin G Ammonium

D. M. YOUNG, M.D., R. J. WILSON, M.D.,
AND H. M. G. MAC MORINE, M.A.

ORAL administration of penicillin is convenient, inexpensive, and acceptable to the patient.

Among the penicillin compounds that have been found effective are the sodium, potassium, calcium, aluminum, procaine, and ethyltyrosine derivatives. D. M. Young, M.D., R. J. Wilson, M.D., and H. M. G. MacMorine, M.A., of the University of Toronto report that ammonium penicillin, which is an economical, pure form of the antibiotic, should be included in this group. Essentially the same serum concentrations are achieved by oral ammonium as by oral potassium penicillin.

Fifteen minutes after ingestion of 1,000,000 units of penicillin G ammonium, substantial serum concentration of penicillin is found; the serum level rises rapidly to a peak at the end of the first hour, falls swiftly during the second hour, and then drops less rapidly until the end of the sixth hour. Even then, therapeutic concentrations still exist.

Passage of the medication from the gastrointestinal tract into the serum decreases when the drug is taken after a meal rather than before. Thus 500,000 units before breakfast provides about the same serum concentration as 1,000,000 units after the meal; 500,000 units after breakfast often produces no detectable effect.

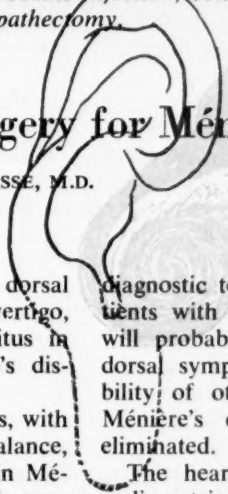
Aside from a rare slight diarrhea, gastrointestinal upsets do not occur with oral ingestion of penicillin G ammonium. A case of delayed sensitivity reaction has been reported of the type that is not uncommon after intramuscular penicillin.

Oral use of penicillin G ammonium. Canad. J. Pub. Health 43:390-396, 1952.

If relief of Ménière's disease is obtained by procaine injection, conditions are suitable for sympathectomy.

Sympathetic Surgery for Ménière's Disease

E. R. GARNETT PASSE, M.D.
London



STELLECTOMY or upper dorsal sympathectomy relieves the vertigo, hearing difficulty, and tinnitus in many instances of Ménière's disease.

Neurovascular disturbances, with underlying autonomic imbalance, may be the etiologic factor in Ménière's disease, tinnitus, and some nerve deafnesses, according to the late E. R. Garnett Passe, M.D.

Stimulation of the cervical sympathetics produces reduction in caliber of the intracranial vessels. In abnormal vascular states, the labyrinthine vessels probably possess the capability of spasm, such vasoconstriction producing initially hyperexcitability of the labyrinth. An abnormal labyrinth, besides aiding in the production of vertigo, will contribute to abnormal autonomic reflexes and will increase any existing autonomic imbalance.

Direct application of epinephrine to the exposed semicircular canal produces pronounced vasoconstriction. Gross dilatation of the vessels of the membranous canal and supporting trabeculae will often follow procaine block of the stellate ganglion.

• Stellate block with 1% procaine hydrochloride may be used as a diagnostic test for selection of patients with Ménière's disease who will probably benefit from upper dorsal sympathectomy. The possibility of other lesions simulating Ménière's disease must first be eliminated.

The hearing is carefully tested audiometrically before and two and ten minutes after injection. If tinnitus is subdued or relieved and audiometric improvement is noted in the low tones for air conduction, sympathectomy should be done. Speech audiograms may indicate an even greater improvement, suggesting that the disturbance in Ménière's disease is not confined to the periphery but may involve the whole auditory projection pathway.

Stellectomy is performed by the standard anterior approach, and the vertebral artery is stripped. Upper dorsal sympathectomy is done by the Smithwick technic, except that only the second and third ganglia are decentralized.

Vertigo is relieved or improved in nearly all instances by stellectomy and in a slightly smaller number by upper dorsal sympathectomy. Hearing is substantially improved in a third of cases by stellectomy and in a fourth by sympathectomy.

Surgery of the sympathetic for Ménière's disease, tinnitus, and nerve deafness. Arch. Otolaryng. 57:257-266, 1953.

Slight improvement is achieved in another third. Tinnitus is completely relieved or reduced in all but a quarter by stellectomy, and in all but a third by sympathetic division.

Although stellectomy appears to give slightly better results in relieving tinnitus and in improving hearing, the Horner's syndrome produced is sometimes a cosmetic disadvantage in women.

• Another group of individuals has tinnitus as a chief symptom with only a slight degree of deafness. Procaine block may again be used to indicate cases for surgical intervention. The block will also relieve the tinnitus accompanying some instances of cervical osteoarthritis, but not the tinnitus of otosclerosis. However, sympathectomy may not produce the same permanent effect that the block produced temporarily. In the immediate postoperative period, the tinnitus and hearing may be worse, probably because of surgical irritation.

Tinnitus is completely relieved or reduced in half the individuals by stellectomy, and in about 65% by upper dorsal sympathectomy.

• Perceptive nerve deafness can be improved by sympathetic surgery, but the underlying mechanism for improvement is not known. Procaine block is used to test advisability of surgery.

After stellectomy, 65% have a hearing gain of 10 decibels or over. About 72% show the same amount of improvement from upper dorsal sympathectomy. One procaine hydrochloride injection of the second and third ganglia may occasionally give almost complete relief.

Transverse Pelvic Measurements

ROBERT W. CURRY, M.D.

BY using a target-film distance of 5 ft., the divergent distortion of the transverse diameters of the pelvis becomes relatively constant. The possible error in the measurement of the actual dimensions by this method is no more than 3 mm., too small to be important, finds Robert W. Curry, M.D., of Orange Memorial Hospital, Orlando, Fla.

No special apparatus is required except roentgenographic equipment with which a 5-ft. target-film distance can be obtained. A supine—anteroposterior—film of the pelvis and abdomen is made at a target-film distance of 5 ft. The exposure is 3 times as much as used for ordinary pelvimetry at a distance of 3 ft.

The transverse diameter of the pelvic inlet and the interspinous diameter are measured directly on the film by means of a scale calibrated to correct divergent distortion.

A simple method of roentgen pelvimetry. Am. J. Roentgenol. 69:638-646, 1953.

Unhesitating surgery, after restoration of blood and electrolytes, is needed for obstruction in the elderly.

Intestinal Obstruction in the Aged

MORTON S. GOLDSTEIN, M.D., CYRUS L. BEYE, M.D., AND SIDNEY E. ZIFFREN, M.D.
State University of Iowa, Iowa City

ALWAYS a serious surgical problem, intestinal obstruction is especially so for the elderly. Conservative management is hazardous, while early surgery appears to reduce the mortality.

Morton S. Goldstein, M.D., Cyrus L. Beye, M.D., and Sidney E. Ziffren, M.D., report an over-all mortality of 25% among 92 cases seen over a seven-year period.

Perforation occurred in 10 cases, with only 5 of the patients surviving. All the survivors received blood, antibiotics, and early surgery. Conservative measures, including tubal deflation, were attempted for 4 of the patients who died. The other succumbed before therapy could be started.

Apparently aged persons lack the reserve needed to respond to the severe stress of intestinal obstruction. Electrolyte deficiencies may become irreversible. In the aged, closed-loop obstruction is frequent and may lead to rapid perforation with resultant peritonitis.

Attempts to decompress the large bowel by a tube usually end in failure and carry the risk of perforation. Repeated enemas will not relieve mechanical obstruction. Only surgical decompression is effective and should be done as soon as practicable—after the patient is hydrated and blood volume restored.

Resection of the large bowel is interdicted because of the danger of leakage, peritonitis, and the stress of such a formidable procedure. The physician should remember that symptoms may be slight even with complete obstruction. The diagnosis is usually confirmed by a roentgenogram of the abdomen. A barium enema may be needed to find the site of obstruction in the large bowel.

For lesions in the rectum, a sigmoid colostomy is done. If the lesion is in the left colon, a transverse colostomy is most satisfactory. Ileocolostomy is preferred to cecostomy for lesions in the right colon.

After colostomy, if the distention is great, the margins of the bowel can be protected with petroleum jelly gauze and a needle or tube inserted to remove the gas. A resection and anastomosis are performed later when the patient is in satisfactory condition.

With small bowel obstruction, the symptoms of cramplike pain and vomiting usually start abruptly

Intestinal obstruction in the aged. J. Am. Geriat. Soc. 1:205-212, 1953.

and rapidly increase in severity. Borborygmi heard by auscultation, occurring synchronously with the abdominal pain, are virtually diagnostic; loops of distended small bowel are seen on the upright abdominal roentgenogram.

Surgery is mandatory as soon as the patient is in satisfactory condition. The simplest procedure necessary to overcome the obstruction is performed. Resection is done only when definite gangrene is observed. Cutaneous ileostomy should not be used because of severe fluid and electrolyte losses. In such cases a short-circuiting procedure is usually far more satisfactory. At the first signs of resumed peristalsis, the Levin tube is removed from the stomach. Electrolytes must be carefully maintained postoperatively.

Operation for Renal Tuberculosis

JOHN K. LATTIMER, M.D.

SEGMENTAL nephrectomy can be done in selected instances when tuberculosis involves only part of a kidney. Streptomycin and PAS greatly reduce the possibility of postoperative fistula formation and fatal miliary dissemination.

Less than 5% of patients with renal tuberculosis are suitable for partial nephrectomy. The active process must be confined to one segment of the kidney and the vascular supply be such that resection is possible. Any other tuberculous foci in the body should be quiescent.

John K. Lattimer, M.D., of Columbia University, New York City, gives prolonged and intensive preoperative chemotherapy to reduce the activity of the lesions. Retrograde pyelograms and a renal arteriogram may be needed to decide advisability of surgery.

Manipulation of the tuberculous portion must be avoided. Occlusion of the renal vessels and the use of a preliminary cobbler's stitch isolating the diseased area help prevent dissemination of tubercle bacilli. The renal capsule is peeled back liberally to reveal the extent of the process. The involved parenchyma, together with a margin of normal tissue, is removed by blunt and sharp dissection.

Hemostasis is achieved by ligation, fulguration, or pressure with Gelfoam. Flaps of renal capsule are then closed over the cut end of the kidney, and the wound is flushed with streptomycin solution. A drain is left in place.

Streptomycin and PAS are given postoperatively until pyuria has disappeared and are continued for a year if the renal tuberculosis is bilateral or if prostatic tuberculosis is found.

Partial nephrectomy for tuberculosis. Am. Rev. Tuberc. 66:744-749, 1952.

Medical management should be considered for patients with some types of staghorn kidney stone.

Staghorn Renal Calculi

ELMER HESS, M.D., RUSSELL B. ROTH, M.D., AND ANTHONY F. KAMINSKY, M.D.
St. Vincent's Hospital, Erie, Pa.

THE management of branching calculi in either or both kidneys often depends on complicated factors.

Several possible causes must be differentiated and choice made between exclusively medical care and removal of the stone or entire organ. Postoperative recurrence must be prevented.

The tendency to form stone is occasionally inherited. A metabolic abnormality may be responsible, such as cystinuria, high blood levels of uric acid, or parathyroid adenoma.

Urinary stasis is a more frequent cause, in the experience of Elmer Hess, M.D., Russell B. Roth, M.D., and Anthony F. Kaminsky, M.D. Obstruction is not limited to the ureteropelvic junction. The lower end of the ureter may be responsible in unilateral cases and the vesical neck or the external urethral meatus in bilateral disease. Long sojourn in bed may affect drainage.

Virtually every organism encountered in calculous disease can be eradicated. Urea-splitting types are major offenders, since the strong alkalinization of urine favors growth of stones. Staphylococci may be destroyed by various agents, *Bacillus proteus* by Gantrisin, *B. pyocyaneus* by polymyxin and terramycin, but either of these organisms may resist all medication.

Some branched stones cause few symptoms and require medical care only. However, solid formations can be withdrawn through incisions first in one kidney, later in the other. Surgery is far more difficult after postoperative recurrence. Multiple, friable, or mushy deposits may be impossible to extract completely.

Operation is done for severe symptoms, rapidly progressive disease, or associated infection. If on-

Staghorn calculi. J. Urol. 69:347-353, 1953.

ly 1 kidney is affected, nephrectomy is usually safe, quick, and followed by total recovery. The postoperative hospital stay is about ten days, and most kinds of work can be resumed in a month.

The organ is often removed with the stone if the patient is elderly, if extirpation is difficult, or the cost of long medical treatment prohibitive. The remaining kidney must be watched closely, with regular urinalyses and plain radiograms.

No rule of thumb can be applied in bilateral cases. The less seriously damaged organ is usually cleaned out first with good results, and whatever happens to the other will not be disastrous. However, intolerable pain on one side may require immediate relief.

Generous incisions are made into the renal parenchyma, but massive through-and-through sutures are too destructive for use. A nephrostomy tube and splinting ureteral catheter are inserted for postoperative irrigation of the renal pelvis.

Invading organisms should be identified and appropriate drugs started just before operation. Penicillin, Chloromycetin, and terramycin are especially suitable. For the worst infections, terramycin or polymyxin may be instilled through the nephrostomy tube.

Acute spreading pyelonephritis may be controlled medically, but chronic infection only by recovering the stone.

Postoperatively, calcium phosphate debris may be dissolved by solution G in 1:20,000 Zephiran solution, or the less irritating solution M. Tube and splinting catheter may be left in place three or four weeks after ureteropelvic plastic revisions, or in other cases until urinary drainage indicates renal recovery.

A diet relatively low in phosphorus may be given with Shorr's aluminum hydroxide regimen.

Strictly medical therapy should prevent calculous growth and perhaps reduce size, though total disappearance is not expected. Large amounts of water should be drunk daily to keep stone-forming material in solution.

Composition of a fragment or crystalline sediment in urine is analyzed. Most concretions are calcium phosphate, possibly mixed with a little ammonium, magnesium, or carbonate. If no infection is observed, urine should be acidified by an acid-ash diet and ammonium chloride, sodium acid phosphate, or similar agent.

When acidification is prevented by urea-splitting bacteria, aluminum hydroxide is given as Basaljel, if tolerated, or as Amphojel. Doses of 40 cc. are administered an hour after meals and at bedtime. Occasionally, estrogens are employed to increase citric acid output.

Compounds other than calcium phosphate require specific diets, for instance, alkaline ash and sodium citrate for uric acid or reduction of oxalic acid for oxalate stones.

To gain the patient's cooperation, radiograms of staghorn stones should be explained and changing size during therapy pointed out.

Muscle stretching, first with curare and then unaided indefinitely, may prevent muscle spasm deformity.

Orthopedic Treatment of Poliomyelitis

VICTOR H. RAISMAN, M.D.
New York Medical College, New York City

JULIUS SCHNEIDERMAN, M.D.
Queens Hospital, Jamaica, N. Y.

INTENSIVE stretching of muscles, facilitated by use of curare, is the best orthopedic method of treatment for acute and subacute poliomyelitis, assert Victor H. Raisman, M.D., and Julius Schneiderman, M.D. Satisfactory stretching without curare is impossible because of pain.

The stretching is designed to carry every joint through a complete range of motion and to stretch every muscle to a normal physiologic length. After the first few days of treatment the greatest effort is exerted in stretching the heel cords, hamstrings, adductors, quadriceps, back, and neck extensors.

Advantages of muscle stretching are: [1] retention of muscle length, [2] prevention of fixed deformities, [3] no impediment to recovery of power by weak muscles, [4] no need for casts and braces, and [5] freedom from circulatory disturbances.

TECHNIC

Curare is given intramuscularly every eight hours. The usual starting dose, 0.9 units per kilogram of body weight, is gradually increased to 1.5 units. Muscles are stretched by a physical therapist at intervals spaced three-quarters of an hour, one and one-half hours, and two and one-half hours after each daytime injection. The patient also is encouraged to stretch himself, and, if afebrile, to walk and exercise.

The heel cords are stretched until the ankle can be passively dorsiflexed to 65° with the foot in some inversion and the knee in extension. The hamstrings are stretched until the hip can be passively flexed to 45°, with the knee extended. The adductors are stretched by flexing both hips to a right angle and then externally rotating the hips until the thighs can be placed on the bed in frog position. The back is stretched until the face can be placed between the knees, which are held in extension with the entire back forming a rounded curve.

Stretching with the aid of curare is done until normal muscle length is restored. Curare is then discontinued but not the stretching. If after three days muscle tightness recurs, curare is resumed and stretching is continued. Otherwise the patient is discharged, although the

Orthopedic treatment of acute and subacute poliomyelitis by early stretching with the aid of curare. J. Internat. Coll. Surgeons 19:93-103, 1953.

stretching exercises should be kept up indefinitely.

PRECAUTIONS

When curare is given intramuscularly, the effect becomes noticeable after ten minutes, rises to a peak at one-half to three-quarters of an hour, and then subsides. The patient should be closely observed until the peak effect is passed.

For safety in treatment, the following precautions are necessary: [1] the plunger must be pulled back to insure that the needle is not in a blood vessel, [2] a syringe containing 1 cc. of Prostigmine, 1:2,000, must be on hand for use if respiratory difficulty develops, [3] a positive pressure oxygen mask or anesthesia machine must be ready and a member of the house staff trained in use of the apparatus available, and [4] the initial injection is given intravenously in a dose of 0.1 cc. to observe a possible myasthenia-like reaction.

Curare should be given after meals. Extreme weakness and lethargy indicate the advisability of decreasing the dose but double vision and increased temporary skeletal paralysis are pharmacologic effects not necessitating reduced dosage.

Patients who have been treated in a respirator should be examined before use of curare to confirm the absence of throat paralysis and chest roentgenograms should be made to detect possible atelectasis.

Prosthesis for Radial Head Fracture

J. C. CHERRY, M.D.

AN acrylic head may be substituted when the head of the radius must be excised because of fracture. In the ideal case for the prosthesis, states J. C. Cherry, M.D., of Dublin, Ireland, the radial head is shattered but the capitulum not seriously damaged.

Local formation of new bone and proximal displacement of the radial shaft causing a painful and weakened wrist are among usual undesirable sequelae of excision of the fractured head of the radius. The acrylic prosthesis will prevent proximal displacement of the radial shaft and consequent strain on the distal radioulnar joint and maintains a normal carrying angle of the elbow.

A posterior approach gives best exposure for fitting the synthetic head and for repair of the annular ligament. The anconeus and the supinator are separated from the ulnar attachments and the entire mass is retracted laterally. The neck is cut through with a Gigli thread saw and the severed neck is reamed with a crown saw. The acrylic head is then fitted tightly on the neck, the base of the head lying just free of the prominence of the radial tuberosity.

Use of acrylic prosthesis in the treatment of fracture of the head of the radius. J. Bone & Joint Surg. 35:70-71, 1953.

Whether congenital or acquired, a deep cul-de-sac of Douglas is an important factor in uterine prolapse.

Posterior Vaginal Enterocele

LOUIS E. PHANEUF, M.D.
Tufts College, Boston

HERNIA of the cul-de-sac of Douglas, posterior vaginal enterocele, may lead to failures in pelvic plastic operations if the condition is not recognized and treated appropriately.

The enterocele is usually the result of an abnormally deep cul-de-sac of Douglas, congenital or acquired. When the unusual depth is congenital, intraabdominal pressure is directed against the cul-de-sac and traction is applied to the posterior lip of the cervix and the anterior wall of the rectum, resulting in prolapse of the uterus, the rectum, and the anteriorly attached bladder. In most cases a congenitally deep cul-de-sac is responsible for the so-called nulliparous prolapse.

An acquired deep cul-de-sac, with posterior vaginal enterocele, may result from the trauma of labor and the tearing or stretching of the thin rectovaginal fascia, especially during operative delivery. A hernial sac is formed that increases with time.

A posterior vaginal hernia may also be the consequence of an operation for prolapse. After amputation of the cervix, anterior and posterior colporrhaphy, perineorrhaphy, and fixation of the uterus to the abdominal wall, a wide space is left between the remnant of the cervix and the rectum. Here a hernia may develop in the course of time.

High rectocele should be differentiated from enterocele.

In reviewing 91 cases of posterior vaginal enterocele, Louis E. Phaneuf, M.D., states that in most cases the Ward vaginal operation is the best method of repair.

This consists of dissection of the posterior vaginal segment up to the cervix uteri or the vaginal vault, exposing the rectum and the cul-de-sac hernia. Exposure is facilitated by the introduction into the rectum of a small folded sponge, well lubricated with petroleum jelly and held by ring forceps. The forceps is covered by sterile drapes and manipulated through the sterile coverings.

The hernial sac is picked up with Allis forceps and freed from surrounding structures by sharp and blunt dissection. The sac is then opened superiorly and the contents reduced. The base is ligated and the sac amputated.

The uterosacral ligaments are approximated in the entire length by

Posterior vaginal enterocele (hernia of the cul-de-sac of Douglas). Obst. & Gynec. 1:257-262, 1953.

interrupted sutures of fine silk or catgut, and the pelvic floor is repaired by uniting the component layers.

For some elderly patients with large enteroceles and in some cases of recurrence with stretched and atrophied tissues, subtotal or total colpectomy may be required.

Abdominal methods are reserved for very large hernias and hernias complicated by adhesions. The abdominal procedures rely upon the application of superimposed purse-string sutures of nonabsorbable material from below upward to obliterate the cul-de-sac, care being exercised not to include the ureters in the sutures.

To prevent the subsequent formation of an enterocele, the cul-de-sac of Douglas should be closed or obliterated when performing vaginal hysterectomy, and the uterosacral ligaments approximated to each other throughout the entire length.

Prevention of Postpartum Hemorrhage

J. D. MARTIN, M.D., AND J. G. DUMOULIN, M.D.

INTRAVENOUS ergometrine, if given with the crowning of the fetal head, causes a significant reduction in blood loss in the third stage of labor and post partum.

When 1,000 consecutive vaginal deliveries in which intravenous ergometrine was used were compared with 1,000 cases in which the same drug was given intramuscularly, J. D. Martin, M.D., and J. G. Dumoulin, M.D., of the University College Hospital, London, found that the incidence of primary postpartum hemorrhage was 1.2% for patients receiving the intravenous drug, compared to 13.1% with the intramuscular injection. The former patients also had less postpartum anemia and a definitely shorter third stage of labor. However, the rate of manual removal of the placenta is increased from 1.1% to 3% when the intravenous route is used.

Timing is most important with the intravenous method. The ergometrine, 0.5 mg., is given as the head is crowning and acts within a minute, causing a tonic uterine contraction and placental separation, while part of the baby still occupies the uterine cavity. The shoulders and body of the baby are delivered slowly.

To deliver the placenta, a hand is placed on the fundus uteri, which is gently squeezed at the time of the first contraction; simultaneously, traction is applied to the umbilical cord. On completion of the third stage, an intramuscular injection of ergometrine, 0.5 mg., is given. If the placenta is retained longer than fifteen minutes, preparations for manual removal are started.

Use of intravenous ergometrine to prevent post-partum haemorrhage. Brit. M. J. 4811:643-646, 1953.

A large scale study is needed to clarify the problem of abortion and evaluate therapy.

Threatened and Repeated Abortion

ARTHUR G. KING, M.D.
University of Cincinnati

LAGGING far behind recent spectacular advances in other fields of obstetrics is the preservation of pregnancies that threaten to abort. The incidence of threatened abortion in all pregnancies is from 3.9 to 26%, and of abortion, 5 to 18%.

The causes for abortion are grouped by Arthur G. King, M.D., as follows: [1] defective fertilized ovum, [2] mechanical elements, such as location of the implantation, position of the placenta, and abnormalities of the uterine musculature, [3] toxic and psychologic factors, [4] poorly prepared or nourished endometrium, with circulatory impairment produced by such factors as retroversion, cervicitis, or tumors, and [5] improperly maintained decidua because of hormone imbalance or vitamin deficiency. Only for the last 2, or possibly 3, of these causes can the obstetrician hope to do much at present.

During the past decade, aside from psychotherapy and the correction of ordinary obvious pathologic conditions, threatened abortion has been treated chiefly by the administration of hormones and vitamins C, E, and K. The value of hormones or vitamins in such cases is bitterly disputed. Actually the percentage of threatened abortions that can be saved by any type of therapy is probably extremely small.

Factors that seem to favor spontaneous abortion are increasing age, previous abortions, difficulty of conception, and retroversion of the uterus. The weight of evidence suggests that threatened abortion does not significantly change the incidence of infant deformity.

To deny the pregnant woman any hope of help from medical science risks serious psychologic trauma. On the other hand, to hold out false expectation of the benefits of treatment borders on charlatanism. The ethical practice of medicine requires that the obstetrician recognize that, whatever treatment is given, two components exist: a very small medical and a very large psychotherapeutic one.

Each patient must be evaluated as to [1] anatomic and physiologic derangements that are susceptible of correction, [2] need for support, attention, and help and the advisability of providing these factors, and [3] economic capacity in relation to the need for attention.

Great confusion exists on the problem of abortion because con-

Threatened and repeated abortion. Obst. & Gynec. 1:104-114, 1953.

clusions are often drawn from inadequate numbers of cases without proper controls or consideration of the element of chance. Evaluation of therapeutic agents for threatened and repeated abortion requires a large, carefully controlled series of cases conducted as follows: [1] utilization of standard criteria of threatened and repeated abortion, [2] grouping of the same kinds of patients in relation to private or clinic series, [3] sufficient numbers of cases, [4] adequate control by strict rotation of cases, [5] elimination of psychologic variants by the use of placebos and identical methods of management, and [6] use of the same dosages of a given drug on the same schedule.

Hexamethonium for Hypertension of Pregnancy

NORMAN MORRIS, M.D.

MOST cases of preeclampsia or essential hypertension during pregnancy regress with bed rest and sedation. Hexamethonium therapy should not be considered until customary treatment has failed and fetal prognosis is poor.

The compound should not be given orally, warns Norman Morris, M.D., of the Postgraduate Medical School of London; large amounts are required by this route and adsorption during pregnancy is especially variable. The risk of persistent hypotension or paralytic ileus is greater when hexamethonium is given orally. Adsorption and hypotensive doses are more uniform when given intramuscularly.

Intramuscular dosage is best established with 20 mg. initially; blood pressure is recorded every ten minutes with the patient sitting in bed. Amounts are then increased until blood pressure falls satisfactorily. The dose thus determined is given every three to four hours; pressures are recorded hourly by day and every two hours at night. Blood pressure fall is erratic but usually persists three or four hours.

Hexamethonium did not materially alter the course of the disease among 10 patients studied but did help to stabilize the condition. Labor was not significantly affected.

The drug accumulates in amniotic fluid. When such fluid is swallowed by the fetus, the immediate effects upon intestines may predispose to paralytic ileus. Reduction of bronchial secretion by hexamethonium may provoke pneumonia. Such dangers are unproved, however, because some infants have no ill effects with large amounts of hexamethonium in the amniotic fluid.

Hexamethonium compounds in the treatment of preeclampsia and essential hypertension during pregnancy. Lancet 264:322-324, 1953.

Improvement seen in psychopaths after lobotomy suggests that the disorder actually is a distinct psychosis.

Lobotomy for Psychopathic Personality

HARRY F. DARLING, M.D.
Whittier Hill Sanitarium, Amesbury, Mass.

JAMES W. SANDDAL, M.A.
Wyoming State Hospital, Evanston

EARLY life experiences and social environment have been blamed for the development of psychopathic personality and have been presumed to create a deficiency in the social interaction of the individual.

Harry F. Darling, M.D., and James W. Sanddal, M.A., conclude that this disorder is not a social maladjustment but is of sufficient magnitude to be termed a psychosis and is the result of environmental stress superimposed on hereditary tendency.

Transorbital lobotomies were done for 18 patients with severe psychopathic personalities requiring confinement on security wards in a state hospital. More than half of these individuals are now socially adjusted away from the hospital. Some of the remaining will undoubtedly adjust to normal society in the near future, and all but 1 have been amenable to retraining.

The improvement after operation shows that this disease is not simply a deficiency in social interaction, but a definite and distinct psychotic disorder.

The syndrome is not entirely the result of surroundings, for psychopaths come from all kinds of environment and home conditions. Moreover, no particular type of environment will cure the illness. Evidence of the disease in the families of patients, but not necessarily in the siblings, suggests an inherited tendency to psychopathic personality, with the syndrome developing as a result of environment.

Traits of other mental disorders accompany the syndrome but not to the extent found in the frankly paranoic, neurotic, or schizophrenic person. These traits, which do not usually progress in the psychopath as in patients with the other diseases, are symptoms of the psychopathic personality. After a lobotomy, the concomitant symptoms disappear together with the psychopathic personality.

The psychopath will go to any extreme to avoid personal discomfort. But the behavior is often so stereotyped that acts which previously caused discomfort will be repeated, even when the consequences of the repetition are known.

Since the psychopath gets no masochistic enjoyment from punishment, the acts which almost cer-

A psychopathologic concept of psychopathic personality. J. Clin. & Exper. Psychopath. 13:175-180, 1952.

tainly bring on much unwanted punishment are irresistible impulses. The asocial drives are beyond the patient's control.

That this abnormal deviation in drives is unaccompanied by delusions or hallucinations does not controvert the fact that the drives are strong, abnormal, and the result of psychotic personality change. The irresistible impulse, rather than poverty of affection, is what causes the psychopathic personality to hurt beloved persons.

The lack of sorrow or gratitude is no more a symptom of the psychopath than of the paranoid or the hebephrenic. Pathologic lying, a constant symptom of psychosis in psychopaths, is an abnormal symptom without rational basis and lessens or disappears after lobotomy.

These patients characteristically do not learn from experience and cannot maintain a consistent life pattern in order to hold regular employment. When lobotomy has been performed, the patient can alter behavior as the result of experience and work steadily.

Final Outcome of Alcoholism

FREDERICK LEMERE, M.D.

ABOUT 28% of alcoholics drink themselves to death. Increasing amounts of alcohol are consumed until death results directly or indirectly—through violence or illness.

The drinking of 29% of alcoholics remains essentially the same throughout life; 10% drink with greater moderation; 22% abstain during terminal illness; and 11% stop drinking alcohol permanently exclusive of terminal illness.

Among the 11% who cease drinking, 68% stop without outside assistance. Spiritual conversion, as in Alcoholics Anonymous, accounts for 24% of those who quit, and psychotherapy and aversion therapy for 8%. These facts were ascertained by Frederick Lemere, M.D., of the University of Washington, Seattle, from the life histories of 500 deceased alcoholic individuals—patients or relatives of patients.

Complications of alcoholism, observed in the total sample of 500 cases, include suicide, 11%, divorce, 19%, psychosis, 6%, and complete dependency or dereliction, 5%. The average age at death is 52 years, although 16% live to be 75 or more and 12% die at 40 or younger.

Relapse after three years or more of abstinence occurred among 8% of the subjects, showing how meaningless are evaluations of treatment based on follow-up studies of only a few months.

What happens to alcoholics. Am. J. Psychiat. 109:674-676, 1953.

Medical Forum

Discussion of articles published in MODERN MEDICINE *is always welcome. Address all communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Asphyxia Neonatorum*

QUESTION: What is the best treatment for asphyxia neonatorum?

Comment invited from
John P. Fletcher, M.D.
Benjamin Etsten, M.D.
Raymond S. Rosedale, M.D.
Stewart H. Clifford, M.D.
Henry H. Beinfield, M.D.
Peter Gruenwald, M.D.
Virginia Apgar, M.D.

► TO THE EDITORS: I am very interested in the article on asphyxia neonatorum by Drs. David M. Little, L. Jennings Hampton, and Mary Louise White.

I agree that prevention of this emergency lies in good obstetrics. This includes the aspiration of maternal discharges from the mouth, nose, and throat immediately on delivery. If the head has emerged and delivery of the shoulders is difficult, it is sometimes wise to clear the mouth, throat, and nose at once, using the standard mucus tube.

In the care of cesarean deliveries, the airway should be cleared down to the larynx because the infant is likely to initiate respiration and aspirate during extraction from the uterus. Aspiration of the stomach contents is a wise precaution in cesarean birth and for small prematures.

If the infant does not commence spontaneous effective respiration within two minutes of birth, clearing of the airway should begin at once; the doctor has up to eight minutes, depending on the degree of anoxia present at birth, to assist the infant to initiate respiration without permanent damage.

The authors mentioned the necessity for gentleness in handling the anoxic infant. This is particularly essential in the case of prematurity. If oxygen is delivered into the trachea at the low pressure of 2 to 3 cm. of water, no damage can be done if the intratracheal catheter has a smooth soft tip.

Our experience with stimulant drugs is similar to that of Dr. Little and his associates.

Doctors in smaller centers, wherever oxygen is available, can prevent or help to reverse anoxia just as well as those in large city hospitals.

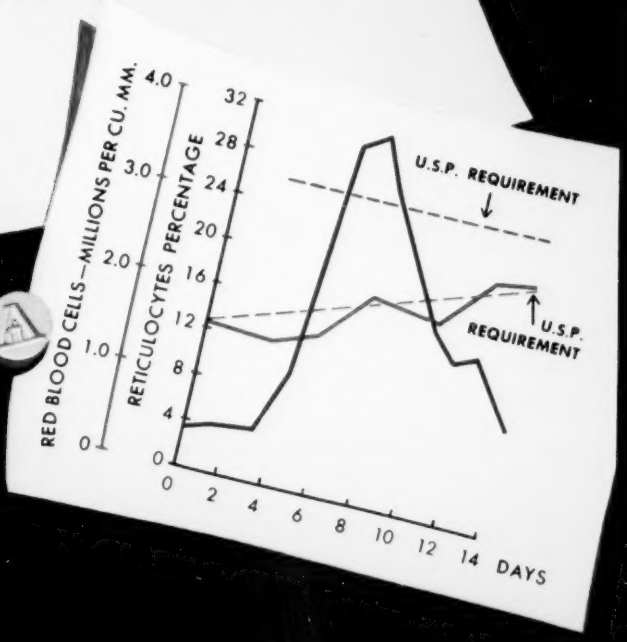
The application of these principles is an important means of reducing neonatal morbidity and mortality.

JOHN P. FLETCHER, M.D.
Toronto

*Modern Medicine, Mar. 1, 1953, p. 98.

CLINICAL REPORT

Biopar tablets are effective oral replacement for injectable vitamin B_{12}



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This new achievement in oral B_{12} therapy is possible *only because of a new intrinsic factor preparation many times more powerful than previous, commercially available intrinsic factor extracts.*

Indications: Pernicious anemia, macrocytic anemia of nutritional origin. May be useful in growth retardation in children, and in anorexia. As replacement or supplementary therapy in polyneuritis, osteoarthritis and osteoporosis, diabetic neuritis, alcoholic neuritis, trigeminal neuralgia, migraine, herpes zoster.

Each BIOPAR tablet contains:
Crystalline Vitamin B_{12} U.S.P. . . 6 mcg.
Intrinsic Factor . . . . . 30 mg.
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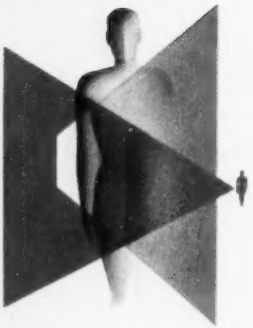
1. DeMarsh, Q. B.: Personal Communication, 1952
2. Limarzi, L. R.: Personal Communication, 1952.



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PHYSIOLOGIC THERAPEUTICS THROUGH RESEARCH

► TO THE EDITORS: To institute a therapeutic measure properly, it is essential to understand the factors responsible for the initiation of normal respiration after birth of a baby. These factors are:

- A receptive functioning respiratory center
- Respiratory muscles capable of response
- Ample supply of oxygen
- Clear upper respiratory passages
- Mature and fully developed alveolar bed
- Distensible lungs

Absence of any one of these essentials results in asphyxia.

Therapy should be directed according to the pathologic clinical condition encountered. Asphyxia neonatorum is divided into 4 clinical phases:

1] Mild asphyxia, due to prepartum drug depression or postpartum anesthetic depression

2] Moderate to severe asphyxia, due to prolonged labor, operative delivery, or trauma

3] Moderate to severe asphyxia, due to prematurity with no anomalies

4] Moderate to severe asphyxia, due to pulmonary pathology, such as fetal or aspiration atelectasis, any alveolar dysplasia, fetal pneumonia, pneumothorax, or pneumomediastinum

In cases of mild asphyxia, the infant resists movement of the head and limbs; muscle tone is adequate. With moderate asphyxia, muscle tone is absent. There is no resistance to opening of the mouth. Respiration is not reflexively initiated by pharyngeal aspiration. In severe asphyxia, the infant does not respond to attempts at resuscitation and appears livid or pallid; respiratory movement is absent.

In mild asphyxia, gentle rubbing of the skin and aspiration of mucus from the nostrils, nasopharynx, and pharynx are usually sufficient to stimulate respiration.

For moderate to severe asphyxia, the most important factor is to oxygenate the infant. This is best done by endotracheal oxygen insufflation and is carried on until the pharynx begins to tighten and show muscle tone with the onset of respiration. The degree of pressure applied through the endotracheal tube during insufflation must vary according to the pathologic condition. If pneumothorax is present, very gentle tube-to-mouth insufflation is maintained until the condition is corrected.

In fetal atelectasis or alveolar dysplasia, a moderate amount of pressure, which will vary from patient to patient, may be applied to inflate the lungs. In patients with alveolar dysplasia who have a minimal amount of alveoli, increased tracheal pressure may not only rupture and fragment the respiratory alveoli that are present, but may actually invaginate the distal portion of the respiratory bronchiole and prevent oxygen from entering other portions of the lung.

For patients with aspiration atelectasis, the first step is to aspirate any material from the tracheobronchial tree before applying any pressure with oxygen.

Mechanical resuscitators are of value only for those who are not adept and expert in manual and individual measures.

BENJAMIN ETSTEN, M.D.
Boston

in the successful management of epilepsy...

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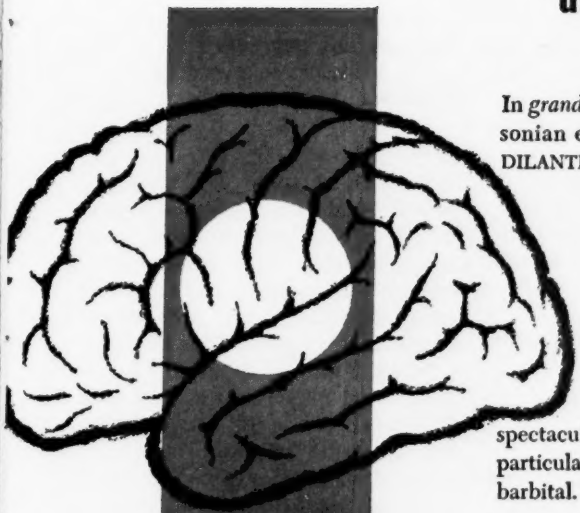

In *grand mal*, psychomotor seizures, Jacksonian epilepsy and focal convulsions, DILANTIN is a therapy of choice.[1] It "offers the special advantage of . . . specificity for the motor cortex . . . without producing dullness of apprehension, lethargy, and lassitude. . . ."[2]

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(1) Krantz, J. C., and Carr, C. J.: The Pharmacologic Principles of Medical Practice, Baltimore, The Williams & Wilkins Company, 1949 (Reprinted 1950), p. 518. (2) *ibid*, p. 515. (3) Carter, S.: Epilepsy, in Conn, H. F.: Current Therapy 1952, Philadelphia, W. B. Saunders Company, 1952, p. 612. (4) Salter, W. T.: A Textbook of Pharmacology, Philadelphia, W. B. Saunders Company, 1952, p. 231.

MEDICAMENTA VERA

Parke, Davis & Company

DETROIT, MICHIGAN

► TO THE EDITORS: In cases of pulmonary atelectasis of the newborn resulting from aspiration of amniotic fluid, meconium, or blood, the best treatment is immediate bronchoscopic aspiration.

A 3-mm. bronchoscope is introduced with the aid of an infant laryngoscope. The trachea is entered, and both main bronchi are aspirated under direct vision. Any abnormality is thus viewed. The percentage of restitution is worth while. There is no practical risk. Postural drainage is inadequate.

I agree with the authors regarding the predisposing and immediate causes of asphyxia neonatorum and the danger of mechanical resuscitators.

RAYMOND S. ROSEDALE, M.D.
Canton, Ohio

► TO THE EDITORS: I find the article of Drs. Little, Hampton, and White concerning asphyxia neonatorum a concise, accurate digest of the present attitudes. I am in complete agreement with all their statements except perhaps the implication concerning the need for endotracheal intubation.

I understand from my friends in pathology who have done innumerable autopsies on newborn babies that an obstruction in the bronchi or trachea that could have been removed by laryngoscopic suction is practically unknown. The obstruction occurs deep down in the bronchioles, alveolar ducts, and alveoli and consists of hyaline membrane material, aspirated amniotic material, or both.

The sole function of direct laryngoscopy is to supply oxygen under slight pressure directly into the trachea. The manipulation is dangerous and should be attempted by only the most skilled. Such help rarely being available when needed, it is much safer to trust to high oxygen contents delivered into the posterior nasopharynx.

STEWART H. CLIFFORD, M.D.
Brookline, Mass.

► TO THE EDITORS: The most important factor in asphyxia neonatorum is establishment of a clear airway quickly. Yet, very few physicians realize that mucus in the nasal passages is not entirely responsible for obstructions that prevent air from getting into the lungs. Congenital bilateral atresia or even unilateral atresia of the posterior nares in the newborn is seldom thought of as a possible cause of asphyxia neonatorum. The presence of a bilateral atresia of the posterior nares will result in certain death if not immediately recognized and treated.

Few realize that an infant will not open his mouth to breathe if he cannot breathe through his nose. This observation was first described by Sir St. Clair Thomson. This point may be proved by pinching together the nostrils of a normal newborn infant when resting quietly. The infant will not attempt to open his mouth, but instead will begin to get red in face, toss his head from side to side, and manifest signs of impending asphyxia. The reflex to open the mouth to

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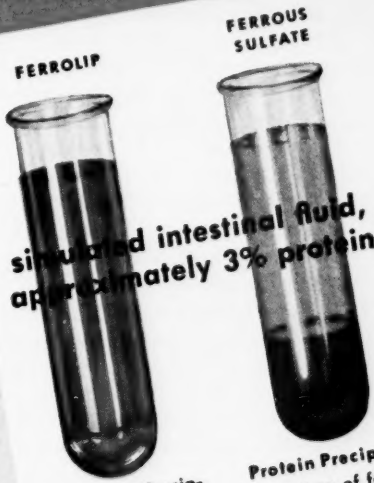

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Not one case of gastrointestinal intolerance was observed in more than 900 patient days, when three Ferrolip tablets were administered at one time between meals. (From the Department of Hematology, University of Iowa, Medical School, Iowa City, Iowa; to be published.)

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breathe is not developed until 4 or 5 months of age.

It is not sufficient merely to aspirate mucus from the nose, or even to try artificial respiration, before making certain that the posterior nares are clear and patent. In all cases of asphyxia neonatorum, I recommend that a catheter be passed through each nostril until it appears in the pharynx. If resistance is met in the passage of the catheter through the posterior nares, force should be used. This may be lifesaving. The possibility of atresia of the posterior nares is thus eliminated.

The pathologists never investigate the posterior nares for atresia at autopsy and therefore overlook the possibility of the anomaly in cases of asphyxia neonatorum. The chest findings which the pathologists usually report in these cases are, I believe, terminal rather than primary causes of death.

HENRY H. BEINFIELD, M.D.
Brooklyn

► TO THE EDITORS: From the pathologist's point of view, free respiratory passages and surfaces are among the most important objectives in the treatment of newborn infants. These should usually be attainable in an infant born at term, unless the child has aspirated excessive amounts of vernix caseosa or meconium.

In premature infants there is a peculiar type of atelectasis, with or without hyaline membranes, in which the pressure necessary to inflate a lung is greatly increased. Many premature babies die with this condition; its nature is unknown and there is no definitive method of prevention or treatment.

A newborn infant suffering anoxia or trauma will show a nonspecific reaction. Pathologically, the manifestations of this reaction are those of shock, and the combination of anoxia and shock damages various vital organs including the brain, heart, liver, and adrenal cortex. It may, therefore, be advisable to combat shock and lesions of vital organs besides supplying oxygen to the infant. Methods to achieve this have yet to be worked out.

PETER GRUENWALD, M.D.
Brooklyn

► TO THE EDITORS: I wish I knew the best way to resuscitate babies! The article by Drs. Little, Hampton, and White is excellent and little more needs to be written.

The principles of a free airway and oxygenation apply to the newborn period equally as much as to the adult period. Brief, thorough oropharyngeal suction should precede inflation with oxygen. The pressures experimentally necessary to inflate newborn collapsed lungs are considerably higher than those presently available on resuscitation equipment. However, the higher pressures *must* be controlled as to length of time of application. Experimentally, one-fourth to one-half second of pressures controlled electrically, in the range of 40 to 60 cm. of water, will inflate most lungs without rupturing them. Low-

(Continued on page 122)

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Each Tablet 'Mi-Cebrin' contains:

Thiamine Mononitrate	10	mg.
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Vitamin A Synthetic	10,000	U.S.P. units
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Boron (as Boric Acid)	0.1	mg.
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Potassium (as the Chloride)	5	mg.
Zinc (as the Chloride)	1.5	mg.

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er pressures applied for two to three seconds will rupture some lungs.

Gastric suction gently performed assures that the infant will not regurgitate and inhale any acid gastric contents. This is of particular importance in cesarean sections, breech deliveries, and for any infants who have shown signs of fetal distress.

The position of the infant in the crib after his pharynx has been cleared is probably better head up than head down, because the cilia of an oxygenated baby will remove amniotic fluid and other debris in any position. In the head-up position, more room is available in the thoracic cage for lung expansion since the abdominal viscera tend to fix the diaphragm at a lower level.

The use of high concentrations of dry oxygen should logically give way to humidified air enriched with oxygen as a prophylactic measure to prevent the formation of hyaline membrane.

The tendency to use heated blankets, cribs, and bassinettes for infants who already have difficulty with oxygenation is being reexamined in the light of the trend toward using cooling technics in pediatric surgery since oxygen consumption is less at lower temperatures than at high ones.

The best prophylaxis for asphyxia neonatorum is to have the infant expand his own lungs by crying actively after a free airway has been assured.

VIRGINIA APGAR, M.D.
New York City

Gynecologic Operations for Infertility*

QUESTION: When should surgical correction of infertility be done, and under what circumstances?

Comment invited from
Edward T. Tyler, M.D.
Samuel R. Meaker, M.D.
Richard Frank, M.D.
Fred A. Simmons, M.D.
Walter J. Reich, M.D.
I. C. Rubin, M.D.
G. E. Norwood, M.D.

► TO THE EDITORS: The article by Drs. Bayard Carter, Violet H. Turner, Clarence D. Davis, and Edwin C. Hamblen focuses attention on a problem very much in need of adequate evaluation.

I would agree with the authors that in many instances the chances of pregnancy are lowered by injudicious surgical procedures. These would include minor operations, such as conizations or cautery, as well as the more major procedures directed toward such vague etiologic factors as retrodisplacements. In regard to the latter, use of a radical approach in the absence of a clear-cut causative factor seems highly questionable.

The fact that a large percentage of women have no difficulty in conceiving even in the presence of marked malpositions of the uterus would imply that this abnormality is not significant. Many times surgery is resorted to simply because the etiology of the couple's infertility has not been determined, and the physician has already tried

*MODERN MEDICINE, Jan. 15, 1953, p. 125.

Am. J. Med. *4*:875, 1948. Slaughter, Donald; Grover, Wm. C., and Hawkins, Richard. Report to American Therapeutic Society, Boston, 1950.

most other known therapeutic approaches. There are still too many "unknowns" in the cause of barren marriages to warrant surgery merely by a process of elimination.

On the other hand, while such approaches as plastic operations on the tubes are attended by a small percentage of success, in many instances they offer the only hope of cure when tubal pathology is the obvious factor. These operations, despite poor statistical success, seem worth while in selected patients, particularly with the improved technics utilized today.

The authors bring out the important point that some patients seek more radical measures rather than endure the long waiting period of medical treatment. At these times, patient education is essential. Many persons who come to the physician for treatment and promptly conceive confuse statistics because the period of infertility is often not long enough to justify considering these patients sterility problems. In the presence of true infertility, the duration of investigation and treatment often must be quite extended, and this must be emphasized to the patient.

EDWARD T. TYLER, M.D.
Los Angeles

► TO THE EDITORS: Everyone experienced in the management of infertility knows that a great deal of ill-judged pelvic surgery, some positively harmful, is done in the hope of relieving that complaint. The statistical study of Dr. Carter and his associates makes this fact abundantly clear. I wonder, however, if a good many readers of their admirable paper may not have been left with the impression that surgery has no rational place in the treatment of female infertility, an idea which, I am sure, the authors do not wish to convey.

Operations may properly be undertaken when, and only when, 4 conditions are fulfilled: [1] The lesion in question is a genuine hindrance to fertility. [2] The lesion cannot be corrected by nonsurgical methods. [3] Operation offers reasonably good chance of correction. [4] Other factors of infertility in the same case have been either ruled out or identified and adequately treated.

A fair number of tubal obstructions can be eliminated by heat, estrogenic therapy, insufflation of gas, and injection of oil. Otherwise, surgery may be considered. I have limited salpingostomies almost entirely to fimbriated-end occlusions in tubes not extensively damaged by inflammatory disease. Of 76 such operations, 24 were anatomic failures, in the sense that the tubes became closed again in spite of repeated insufflations and oil injections; 25 operations were anatomic successes but physiologic failures—the tubes remained open, but the patients did not conceive. The remaining 27 operations resulted in 1 ectopic pregnancy, 2 miscarriages, and 24 babies.

Fertility may be improved by carefully performed surgery in some cases of uterine myoma and of endometriosis. True polycystic ova-

(Continued on page 128)

Adjunct to CERVICOVAGINAL SURGERY:

FURACIN

For shorter, smoother convalescence:

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1. Eroded cervix of multiparous patient with malodorous leukorrhea.[1]

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References: 1. Schwartz, J.: *Furacin Vaginal Suppositories in Pre- and Postoperative Treatment of Cervix and Vagina*, Am. J. Obst. and Gynec. 63:579 1952 • 2. Doyle, J. C.: *Vaginal Infections and Their Management*, Urol. & Cutan. Rev. 55:618, 1951.

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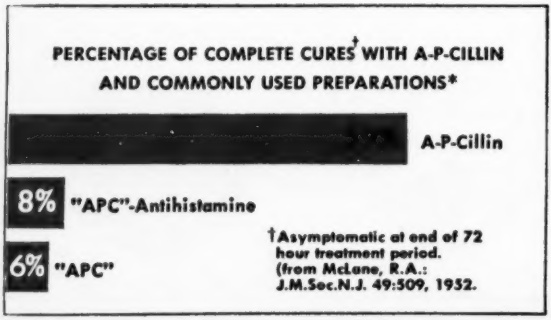

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†*Temperature over 100° F. with other symptoms of acute upper respiratory infection.*

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Each A-P-Cillin tablet provides:

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1. For its analgesic and antipyretic action

Acetylsalicylic acid—2½ gr.
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Phenyltoloxamine dihydrogen citrate —25 mg.

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Dosage: Usual adult dose is 2 tablets t.i.d. Clinical experience indicates that this dosage should be continued for at least 3 days. For optimal effect, tablets should be taken at least 1 hour before or 2 hours after meals.

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* 97.5% of cases completely asymptomatic or improved within 72 hours. McLane, R. A.: Clinical Evaluation of Combined Drug Therapy in Acute Upper Respiratory Infections, J. M. Soc. N. J. 49:509, 1952.

ries, which should be clearly distinguished from normal ovaries containing 2 or 3 harmless little retention cysts, are usually incapable of ovulating. The results are amenorrhea and sterility, and these disorders can often be relieved by ovarian resection.

Valid indications for gynecologic surgery are found only in a minority of sterility cases. In many, definite contraindications exist at the same time, for example, low fertility of the husband. In my own practice, less than 10% of wives are subjected to operation.

I wish that the authors had pointed out that the most common operation of all, curettage of the endometrium, rarely, if ever, improves a woman's chances of conceiving. Their paper is in line with others which have recently appeared condemning frenzied surgery in the female pelvis, notably unnecessary hysterectomies and oophorectomies. Let us hope that such conservatism will prevail.

SAMUEL R. MEAKER, M.D.
Boston

► TO THE EDITORS: Gynecologic operations for infertility should be undertaken only after a careful work-up of the patient and her husband, and only after an adequate period of time has elapsed to prove that conception cannot or does not take place.

The adequate work-up must embrace at least the minimum requirements established by the American Society for the Study of Infertility. Surgical correction should be contemplated only if all other factors are at the optimum level to procure conception.

One year should be set as the minimum time for study and observation of the infertile couple even though a surgical lesion may be present.

Needless to say, these criteria hold true only if the lesion in question produces no symptoms which make surgery necessary from an angle other than infertility.

RICHARD FRANK, M.D.
Chicago

► TO THE EDITORS: I agree heartily with Drs. Carter, Turner, Davis, and Hamblen that great numbers of women are having useless pelvic surgery in the hope of becoming fertile. Operation is not indicated unless the husband is within normal limits of fertility. Operation on the fallopian tubes or intraabdominal procedures should not be done when the sperm do not survive in the cervical mucus at the time of ovulation.

Probably surgery for the relief of infertility should be reserved for those gynecologists or obstetricians especially versed in the treatment of the infertile female only after the patients' husbands have been declared within normal limits by qualified examiners. Thus "useless pelvic surgery" will necessarily be cut down in its frequency.

Pathology of the tubes—Only patients who have been demonstrated to have nonpatent tubes on two or more insufflations with car-

(Continued on page 132)

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bon dioxide gas, followed by one or more uterotubograms, should be recommended for a surgical attack on the oviducts. This will necessarily limit the volume of surgery. These cases, therefore, should be referred to a specialist in tubal plastic surgery. Before surgery is undertaken, the husband and wife should be informed that the best chance of pregnancy is not more than 1 in 5. This is despite claims made in different parts of the country for higher incidence of success, and despite introduction of various artificial splints for keeping the tubes open.

Ovarian surgery—Surgery to the ovaries should be reserved for patients who have tumors of the ovary or who have bilateral polycystic ovaries as determined by irregular or absent menses, abnormal basal body temperature curves, and a palpable tumor. These patients again should not have surgery unless the husbands are within normal limits and unless the sperm survive in the cervical mucus. However, in this group the salvage is approximately 60%. It is equally important for surgery not to be postponed from year to year in the hope that the patient will conceive, as very few women recover spontaneously from bilateral polycystic ovary disease despite published cases.

Retroversion—All patients who have an adherent third-degree retroversion and yet patent tubes must be considered suspect of endometriosis. This group should be offered conservative surgical attack on the disease with a salvage as high as 42% according to Huffman.

In our practice, all patients whose tubes are patent, whose husbands are normal, in whom cervical insemination does exist, and normal secretory endometrium is found, are offered the choice of exploratory laparotomy, uterine suspension, or both. Patients who have had a properly performed suspension do not have increased dysmenorrhea or dyspareunia or lessened fertility rate.

Diseases of the cervix—All patients who consistently have no sperm living in the cervix at the time of ovulation after adequate intercourse with a husband who is normal, or who have a chronic persistent discharge, are entitled to have a gentle dilatation and curettage, cervical culture, and light cauterization of the cervix. In patients so selected, pregnancy may occur in as many as 40%.

These patients must not be overtreated; strenuous cauterization or dilatation, amputation of the cervix, and conization of the cervix should be largely restricted if not completely omitted from the surgical armamentarium.

No one can generalize on the infertile couple; each case must be decided on its own merits, and if after exhaustive study it is supposed that surgery will benefit the individual, the couple should be allowed to make the decision to accept the risk, expense, and inconvenience on a less than 50% chance of ensuing pregnancy.

FRED A. SIMMONS, M.D.
Boston

The Distracting Agony of Hemorrhoids

The torment of hemorrhoids disrupts normal mental processes. Reason, reflection, decision are difficult.

Physicians have for many years prescribed safe, sure Anusol Suppositories, which have given quick relief and peace of mind to thousands of men and women. For use with the Suppositories, we have now added Unguent made of the same ingredients.

The Anusol Suppository quickly forms a soothing, protective film over the irritated rectal mucosa, providing almost immediate relief. The new Unguent, externally applied to inflamed areas, gives prompt, cooling comfort.

Suppositories: boxes of 6, 12 or 24; Unguent in 1 ounce tube. Warner-Chilcott Laboratories, Division of Warner-Hudnut, Inc., New York 11, N. Y.

Prescribe Anusol® WARNER

SUPPOSITORIES UNGUENT

Prompt, Prolonged Relief Without Narcotics or Anesthetics

► TO THE EDITORS: We wholeheartedly agree with Dr. Bayard Carter and associates concerning the nonsurgical management of infertility.

It is imperative that the male be carefully checked with a complete semen analysis before any procedure is advised for the female. In our series of cases we have found that when the management of chronic cervicitis with antibiotics and diethylstilbestrol does not relieve the condition, simple cauterization with subsequent dilatation has been beneficial in some of the cases.

The only time we consider a gynecologic operation for infertility is in cases of endometriosis unresponsive to hormonal therapy, and in the Stein-Levinthal syndrome.

WALTER J. REICH, M.D.
Chicago

► TO THE EDITORS: Gynecologic operations for the relief of infertility are indicated for specific conditions not amenable to other therapeutic measures. Although many operations are performed as a last resort, some are done of necessity, that is, for the persistently unyielding hymen; vaginal obstruction caused by annular constriction; or cervical stricture after electrocoagulation. In these circumstances not only is sexual intercourse interfered with, but the investigation of barriers to fertility in the uterus and tubes cannot be carried out.

Operative procedures employed for the relief of female sterility enumerated from without inwards are excision of a rigid hymen, episiotomy, cervical dilatation, stem pessary insertion (rarely trachelo-plasty), removal of uterine polyps, vaginal or abdominal myomectomy, salpingolysis, salpingostomy, tubal resection and reimplantation into the uterus, and unilateral or bilateral partial resection of the ovaries for secondary amenorrhea and bilateral ovarian dermoid cysts. Conservative operations for pelvic endometriosis are included in this category.

Results of these various procedures have been fairly well established, ranging in success from almost zero for ovarian implantations to 5, 15, or 20% for the tubal plastics and to 30% or higher following multiple myomectomy. The discrepancy in results is caused by individual differences in selection of cases, and in the care with which the comprehensive investigation of sterility is made, including deterrents in the husband. Other variants are length of marriage and infertility and the individual age of the married couple.

The standardization of operative procedures for relief of sterility is essential, and a higher degree of uniformity should be adopted in judging results. These could raise the percentage of successful infertility salvage and at the same time dispel the gloom of the past and encourage efforts at further improvement.

Use of plastic tubing for retaining the stoma, surgically made in

(Continued on page 138)

citrus is a good ANORETIC agent

When taken about half an hour before meals, orange or grapefruit juice is highly effective in helping overweight patients to adhere to their reducing regimens. Citrus has "very definite advantages"* as an appetite appeaser. It helps to reduce the demand for high caloric foods, and supplies readily utilizable carbohydrates to combat hypoglycemia. It is economically available in homes or restaurants. And, of no small consideration, most everyone likes orange or grapefruit juice.

* *Postgrad. Med. 9:106, 1951.*

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FLORIDA *Citrus*

ORANGES • GRAPEFRUIT • TANGERINES

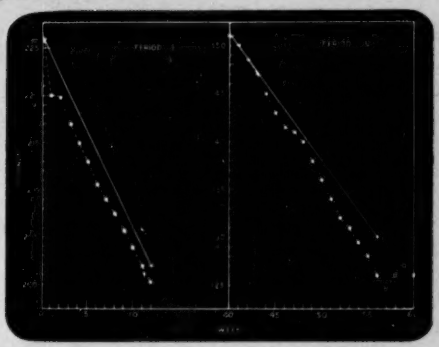


CHART OF WEIGHT LOSS
BROKEN LINE—OBSERVED LOSS • SOLID LINE—PREDICTED LOSS

Robins

In Mephate 'Robins', the clinical usefulness of mephenesin per os has been significantly heightened by the inclusion of glutamic acid hydrochloride, which improves absorption and enhances effectiveness for many patients otherwise unresponsive.* Provides a relaxant effect on skeletal muscle spasm; an ameliorating effect on tremor; and a relief of anxiety without dimming consciousness. Particularly helpful in abnormal neuro-muscular conditions such as rheumatic disorders, disc syndromes and cerebral palsy; alcoholism, anxiety tension states and psychiatric states.

In each Mephate Capsule, 0.25 Gm. mephenesin — with 0.30 Gm. glutamic acid hydrochloride.
Adult dosage starts at 2 capsules 3 or 4 times a day, preferably with food or liquids.

*Hermann, I. F., and Smith, R. T.: Jl. Lancet 71:271 (July), 1951.

the fallopian tubes, and preventive hemostasis by use of an elastic tourniquet in myomectomy, are examples of progress recently made in reconstructive pelvic surgery in childless women.

I. C. RUBIN, M.D.
New York City

► TO THE EDITORS: In the management of infertility, such conditions as abnormal endometrium, polyps, and submucous fibrosis should be removed surgically. At the time of dilatation, curettage, and/or excision, done at the proper phase of the cycle, other necessary information is obtained and often a real therapeutic effect is initiated.

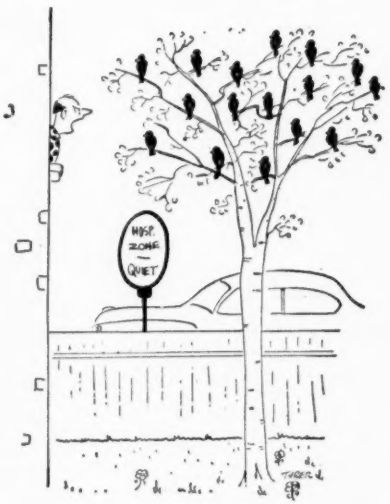
Persistent cystic cervicitis demands definitive surgical correction if specific inflammatory or mechanical interference continues.

Evidence leads one to conclude that major pelvic surgery is to be performed only when:

- Endometriosis is present in sufficient degree to interfere with the mechanics of reproduction.
- Occlusion of the tubes is at the ampulla and caused by inflammation from causes other than gonorrheal salpingitis.
- Displacement of the uterus persists after careful and complete diagnosis and treatment of both female and male factors. An adequate period of time for pregnancy to occur must elapse. Indicated replacement surgery is then logical if all definitive diagnostic procedures indicate that genital tract interference is caused by negative mechanics of the pelvis.
- Fibromyomas, because of size or position, have or undoubtedly will interfere not only with fertility but with the normal course of pregnancy, and when myomectomy is plausible and possible.
- An ovarian tumor is known to persist and be of size and consistency to defy a diagnosis of a small cyst or a cystic ovary.

Among the many diagnostic procedures to aid in giving one the definitive findings and indications for surgical correction of infertility is the minor surgical procedure of culdoscopy. Whenever not contraindicated, this procedure should precede each major pelvic operation for surgical correction of infertility.

G. E. NORWOOD, M.D.
San Marino, Calif.



"All right! All right! Pipe down!"

when she's Imprisoned by FATIGUE

. . . you may free her from iron-deficiency anemia by the simple expedient of prescribing one IBEROL tablet t.i.d.

As you can see by the formula, three IBEROL tablets provide a therapeutic dose of iron plus seven B complex factors including B_{12}. In addition, IBEROL supplies standardized stomach-liver digest and ascorbic acid.

Compressed, triple-coated IBEROL tablets are easy to take with no trace of liver odor or taste. The outer sugar-coating masks the iron, gives the tablet a pleasant odor and flavor.

For prophylaxis in pregnancy, old age or convalescence, one or two tablets are usually enough. May be used as a supplemental hematinic in pernicious anemia. IBEROL is available in bottles of 100, 500 and 1000. Abbott

THREE IBEROL TABLETS: the average daily therapeutic dose for adults, supply:

Ferrous Sulfate (representing 210 mg. elemental iron, the active ingredient for the increase of hemoglobin in the treatment of iron-deficiency anemia)	1.05 Gm.
Plus these nutritional constituents:	
Thiamine Mononitrate (6 times MDR*)	6 mg.
Riboflavin (3 times MDR*)	6 mg.
Nicotinamide (2 times RDA†)	30 mg.
Ascorbic Acid (5 times MDR*)	150 mg.
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.

*MDR—Minimum Daily Requirement
†RDA—Recommended Daily Dietary Allowance

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IBEROL

(Iron, B_{12}, Folic Acid, Stomach-Liver Digest, With Other Vitamins, Abbott)

1-98

Diagnostix

Here are diagnostic challenges presented as they confront the consultant from the first clue to the pathologic report. Diagnosis from the Clue requires unusual acumen and luck; from Part II, perspicacity; from Part III, discernment.

Case MM-243

THE CLUE

ATTENDING M.D: There is a 30-year-old woman in the medical clinic whom I would like you to see. She was referred to us because of irregular pupils and absent ankle and knee jerks. She has received penicillin elsewhere as antiluetic treatment.

VISITING M.D: What sort of luetic disease—tabes?

ATTENDING M.D: That was the diagnosis, but her doctor's letter says that she has never had a positive spinal fluid reaction or an equivocal blood serum reaction.

VISITING M.D: Has she ever had lightning pains, gastric crises, or other sensory or motor abnormalities that are characteristic of tabes?

ATTENDING M.D: No.

VISITING M.D: Is she married? Any children?

ATTENDING M.D: Yes. Three boys.

PART II

VISITING M.D: *(Examining patient)* The pupils are unequal. The left one is about twice as large as the right, and oval, with the long axis in the horizontal plane.

ATTENDING M.D: And no reaction to light.

VISITING M.D: Quite true. Note, when testing convergence the left pupil, after a delay of several seconds, contracts slowly. . . . Now it is just slightly larger than a pinhead. . . . Now after relaxation of convergence it slowly dilates. Neurologic dysfunction is limited to eyes and ankle and knee jerks. How about the physical examination and laboratory work?

ATTENDING M.D: Nothing

(Continued on page 144)

WHAT DOES pain SMELL LIKE, DOCTOR?

Waiting in the doctor's reception room can be quite a trial to some folks—laymen often associate pain with the odors of medication and antiseptics. And this can result in nervousness and tension.

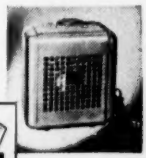
To help correct this situation, doctors all over the country are using Airkem in their offices. Airkem, the quality odor counteractant, kills upsetting odors as soon as they appear.

Airkem costs only pennies a day because less Airkem (by weight) is required than cheaper, more volatile formulations now on the market. And Airkem combines chlorophyll with more than 125 compounds found in nature.

Airkem can be used in three economical ways:

1. Airkem Mist dispensers for "emergency" odors.
2. Airkem portable fan units for continuous odor counteraction.
3. Specially engineered Airkem equipment for your air conditioning or ventilating system.

Call your Airkem Supplier today or write to Airkem, Inc., 241 East 44th Street, New York 17, N. Y.



contains chlorophyll

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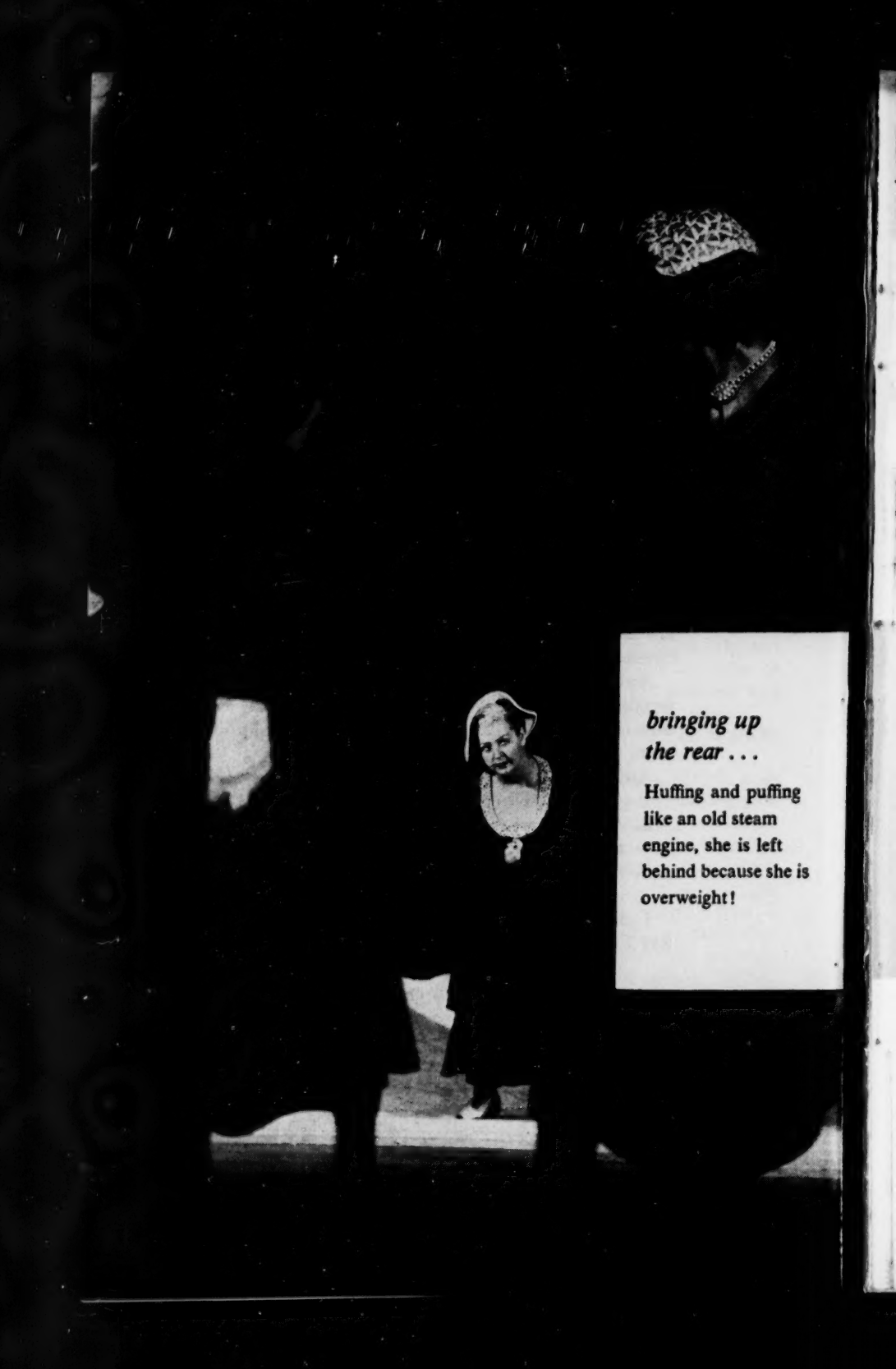
odor counteractant



bringing up the rear . . .

Huffing and puffing like an old steam engine, she is left behind because she is overweight!

'MELOZETS'

*Methylcellulose Wafers**

Bodies, like engines, when constantly strained by an overload, wear out faster. It is well known that fat people always present a medical problem. You can help them lose weight more comfortably by prescribing 'Melozets.'

Patients enjoy eating 'Melozets.' These delicious crackers blunt the appetite by providing a sense of satisfying fullness. They look and taste like graham crackers, and can be made an unobtrusive part of any dietary regimen.

Each 'Melozets' wafer contains 1.5 Gm. of methylcellulose, and is equivalent to approximately 30 calories. One or two 'Melozets' followed by a full glass of liquid may be taken between meals or one-half hour before meals. Not more than 8 'Melozets' should be taken in a 24-hour period. 'Melozets' are available from pharmacists in half-pound boxes of about 25 crackers.

42 different 'Melozets' reducing menus on a handy diet sheet—a note on your prescription blank will bring a pad of diet sheets and a sample of 'Melozets.' Address: Professional Service Dept., Sharp & Dohme, West Point, Pa.

**Patent applied for*

SHARP & DOHME

Division of Merck & Co., Inc.

helpful. A spinal fluid examination was normal.

VISITING M.D: Leave her in a dark room for an hour.

PART III

VISITING M.D: *(One hour later)* Sudden exposure to bright light now causes slow contraction, after a delay of a few seconds.

ATTENDING M.D: Then this isn't an Argyll Robertson pupil.

VISITING M.D: No, the Argyll Robertson pupil is usually contracted, bilaterally, with no reaction to light. Convergence and accommodation cause prompt contraction. The phenomenon occurs predominantly in males. Moreover, with the Argyll Robertson pupil other evidence of syphilis appears. The pupillotonic phenomenon here is unilateral, the oval abnormal pupil is large. This is . . .

PART IV

VISITING M.D: *(Continuing)* a case of Adie's syndrome, a benign disorder simulating tabes dorsalis. The complete form has a typical tonic pupil and absent reflexes. There are incomplete forms, with the tonic pupil alone, or atypical phases of the tonic pupil with or without ankle jerks.

ATTENDING M.D: I guess with that classification someone might say absent ankle jerks without the tonic pupil would be a variant of Adie's syndrome.

VISITING M.D: Correct. But since 2% of normal people do not have tendon reflexes, it can't be substantiated.

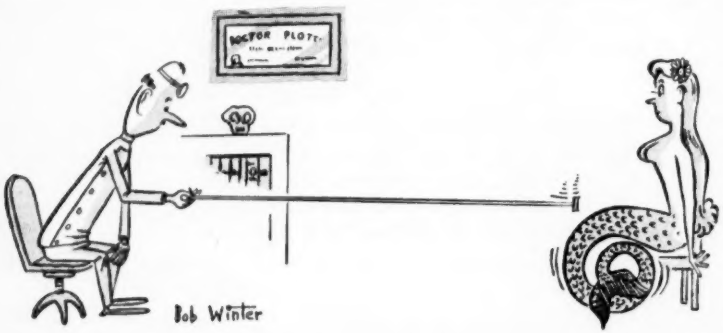
ATTENDING M.D: Unless those 2% all have Adie's syndrome.

VISITING M.D: That's carrying it too far. The important point to consider is that Adie's syndrome must not be confused with tabes. With Adie's syndrome the response to mydriatics is prompt and complete, but is slow and incomplete with Argyll Robertson.

ATTENDING M.D: You didn't try that.

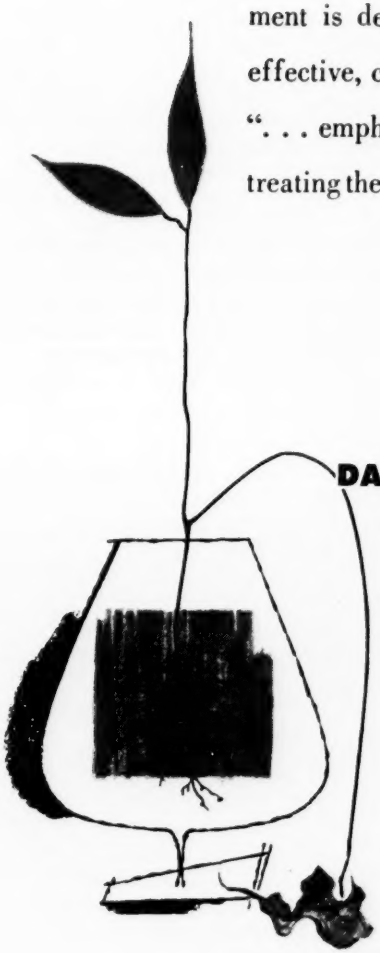
VISITING M.D: I was sure.

ATTENDING M.D: Excuse me; I'll be right back. *(Ten minutes later)* Prompt and complete!



Even though the symptoms of arthritis are mainly articular, the pathological involvement is deeply rooted. Treatment, to be effective, cannot be confined to the joints. ". . . emphasis should be directed toward treating the patient rather than the disease."

Bach, T. F., Arthritis and Related Conditions, F. A. Davis Company, Phila., 1948, p. 97.



DARTHRONOL combines the anti-arthritic benefits of high potency Vitamin D with the nutritional benefits of other essential Vitamins. When you prescribe DARTHRONOL, the general well-being of the chronic arthritic is improved, pain and swelling of the involved joints is diminished, and flexibility is restored.

DARTHRONOL

VITAMIN D	50,000 U.S.P. Units
VITAMIN A	5,000 U.S.P. Units
VITAMIN C	75 mg.
VITAMIN B_1	3 mg.
VITAMIN B_2	2 mg.
VITAMIN B_6	0.3 mg.
NIACINAMIDE	15 mg.
CALCIUM PANTOTHENATE	1 mg.
MIXED TOCOPHEROLS (Type IV)	4 mg.

J. B. ROERIG AND COMPANY, 536 LAKE SHORE DRIVE, CHICAGO, ILL.

LATE REPORTS *from Medical Centers*

★ INSTITUTE FOR CANCER RESEARCH, Philadelphia--Living nuclei have been transplanted from cell to cell in frog eggs. To protect the nucleus by cytoplasm until the moment of injection, the whole donor cell was sucked into a glass tube a few thousandths of an inch in diameter, report Drs. Robert Briggs and Thomas J. King. Reconstructed cells divided normally. Nerve cells are now being used to determine whether specialization is controlled by nuclear or cytoplasmic structures.

★ UNIVERSITY OF SOUTHERN CALIFORNIA, Los Angeles --Patients in the early stages of essential hypertension have increased appetite for salt and eliminate salt and water at high rates. Later, appetite for and excretion of salt are normal or reduced. When Dr. D. M. Green administered a salt-free diet to animals in the early stage of the disease or stopped adrenal hormone injections, blood pressure fell and symptoms disappeared. However, in the late stage, blood pressure was lowered only by removal of the entire pituitary gland or the majority of both kidneys.

★ SLOAN-KETTERING INSTITUTE FOR CANCER RESEARCH, New York City--Arthritis is associated with an abnormal adrenal hormone, named 17a-hydroxy-pregnenolone, and with reduction of normal secretions such as cortisone. The abnormal factor, discovered by the late Dr. Konrad Dobriner and associates in urine of 7 arthritic patients but not in 29 healthy subjects, is counteracted to some extent by cortisone therapy.

* UNIVERSITY OF MINNESOTA, Minneapolis--Delirium tremens is related to magnesium deficiency, a condition that may cause bizarre muscular tremors, agitation, and occasionally convulsions. Chronic alcoholics have an average serum value of 1.4 mEq. per liter, whereas the normal mean is 1.9 mEq. Delirious patients given intramuscular magnesium sulfate by Dr. Edmund B. Flink and associates generally improved, and some responded dramatically.

* UNIVERSITY OF WISCONSIN, Madison--Lysine polypeptides and related compounds that behave much like natural defense agents, except for toxicity, have been synthesized. Viruses and bacteria of many types are agglutinated, and growth and respiration of microorganisms are inhibited as in normal body reactions to infection, report Dr. Mark A. Stahmann and associates.

* YALE UNIVERSITY, New Haven, Conn.--Maternal age during pregnancy may endow offspring with sensitivity or resistance to malignant growth. Dr. Leonell C. Strong observed less frequent cancer in late litters of mice than in early litters. Leukemia decreased with the mother's age, but induced cancer of connective tissue and viral cancer of the breast increased. The present trend toward human longevity may mean raised incidence of cancer.

* UNIVERSITY OF CALIFORNIA, Los Angeles--Ability to withstand radiation may depend on the body's supply of linoleic acid, a fatty component of all living tissue and a factor in growth and repair. The amount must be delicately balanced, however. Dr. James Mead and Barbara Polister believe that a certain quantity of the acid is needed to protect animals from radiation damage, yet a surplus during exposure helps to destroy vitamins and other essential constituents of tissue.

short REPORTS

Dermatology

Tuberculodermal Therapy

Isoniazid is effective in treatment for lupus vulgaris. Drs. Lawrence C. Goldberg and Claudia R. Simon of the University of Cincinnati report rapid response to treatment and no untoward reactions in 2 cases of the disease of over thirty years' duration. Five months after initiation of therapy, biopsies revealed replacement of former granulomatous infiltrate by cicatrix and no signs of activity of the disease. Isoniazid can be given safely in doses of 4 to 5 mg. per kilogram of body weight. Prolonged therapy in smaller doses after clinical and histopathologic improvement is recommended because of possible recurrence or relapse.

J.A.M.A. 151:640-642, 1953.

Cancer

Antileukemic Agent

Abnormal white cells of at least two transferable types of myelogenous leukemia, induced in rats with methylcholanthrene, can be suppressed by oral or intravenous administration of triethylenethiophoramide (Thio-TEPA). Depending on dosage used, the drug also suppresses the white count of normal rats, report Dr. Harry Shay and associates of Temple University, Philadelphia. Thio-TEPA is most effective against the more primitive cells and when administered intravenously. A wide margin of safety exists between the amount needed to suppress abnormal white cells and the amount affecting blood platelets, red cells, and hemoglobin. Depression of platelet count occurring in some animals during therapy is corrected by a rebounding platelet effect shortly after the drug is discontinued.

Proc. Am. A. Cancer Research 1:50, 1953.

Metabolism

Treburon Action in Lipemia

Lipemic plasma is effectively cleared after intravenous injection of Treburon, a synthetic drug similar to heparin. Sublingual administration is ineffectual, but intravenous doses of 15 to 25 mg. result in consistent plasma clearing in patients after oral ingestion of cream, according to Drs. Robert F. Ackerman and D. B. Zilversmit of the University of Tennessee, Memphis. Young women develop less lipemia than do young men after the oral cream, suggesting an explanation for the lower incidence of atherosclerosis in premenopausal women. Determinations of chylomicron counts and plasma turbidities are proportional.

Circulation 7:581-584, 1953.

When Chronic Fatigue, Insomnia are due to Low Blood Sugar Level...

Prescribing a simple change in diet may often restore energy and zest for living in many patients.

THE pace of modern living . . . business pressures, strenuous social activities, hurried meals, improper diet . . . all too frequently lead to exhaustion, loss of energy, inability to sleep. Now clinical studies show that these clinical manifestations are often associated with hyperinsulinism—causing a lowered *blood sugar level.**

Portis reported these fatigue states were aggravated when the patients consumed beverages and foods that contained free sugar. He further stated that while these raise the blood sugar level momentarily, their "free" sugar is burned up too quickly; and a greater letdown follows. On the basis of this evidence a diet high in proteins and relatively high in carbohydrates in a complex form was given to his patients. He found such foods as milk are especially beneficial because they are digested more slowly, and because they maintained the blood sugar level for a longer period.

For these reasons milk with Postum is suggested as a between-meal feeding and bedtime drink. It can often be of practical benefit to the patient. The milk provides nourishment that is slowly, steadily converted to blood sugar. Postum offers a pleasant and palatable flavor. Postum offsets the distaste for hot milk.

Moreover, Postum in the milk drink has a psychological advantage because many patients resent the taking of milk in itself as a regression to their childhood patterns. Postum has been recommended by doctors for over 40 years. It is widely known to your patients as a caffein-free drink—a beverage that has helped countless caffein-susceptibles to break the coffee and tea habit.

We will be glad to secure for you a reprint of Dr. Portis' article. We will also send you without charge a supply of Postum for your patients if you send in the coupon below.

*Portis, Sidney A., Life Situations, Emotions and Hyperinsulinism, J.A.M.A. **142:** 1281-1286 (April 22) 1950.

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Biology

Natural Antimitotic Factor

Ovaries of various animals contain substances that hamper mitosis at different stages and thus keep eggs from dividing. The most powerful antimitotic factor yet found, extracted from the common starfish, is being investigated by Drs. L. V. Heilbrunn and Walter L. Wilson of the University of Pennsylvania, Philadelphia, and the University of Vermont, Burlington. The active material seems to be a mucopolysaccharide of the heparin type.

Federation Proc. 12:64, 1953.

Physiology

Dextran for Nephrotic Edema

By simultaneously increasing colloidal osmotic pressure, plasma volume, and glomerular filtration rate, dextran relieves the severe hypoproteinemia associated with nephrotic edema. In 12 children hospitalized with chronic nephritis, Dr. John T. Olive, Jr., and associates of the Mayo Clinic, Rochester, Minn., observed temporary diuresis of significant degree in 7, with recurrence of the condition in 11 after cessation of therapy. Urticaria developed in 2 patients and severe abdominal and back pain in 1. One child died eleven months after treatment. Daily intravenous infusions of the drug were given for ten to fourteen days with a 10% salt-free solution. Amounts injected ranged from 10 gm. a day for small patients to 25 gm. for large patients, the average daily dose being 1.43 gm. per kilogram of body weight.

Proc. Staff Meet., Mayo Clin. 28:199-204, 1953.

Immunization

Poliomyelitis Vaccines

Antigenic activity against poliomyelitis in man can be induced with experimental vaccines. Virus preparations are produced in cultures of monkey testicular or kidney tissue and rendered noninfectious by treatment with formaldehyde, then tested for pathogenicity in monkeys before human application. Induced antibodies for all 3 immunologic types of poliomyelitis virus were found in human subjects after intramuscular administration of small quantities of a triple vaccine incorporated in a water-in-oil emulsion, reports Dr. Jonas E. Salk of the University of Pittsburgh. Intradermal inoculations of aqueous vaccines produced antibodies against type 2 virus; no decline in the antibody level has been observed for four and one-half months. The noninfectious poliomyelitis vaccines may approximate the immunologic effect induced by the direct disease process, since levels of the antibody induced by such vaccines compare with levels developing after natural infection.

J.A.M.A. 151:1081-1098, 1953.

"Head seems clear."

The new antispasmodic

BUTISOL-BELLADONNA

. . . produces a more effective antispasmodic action than either belladonna or Butisol Sodium alone,

. . . provides Butisol Sodium, the "daytime sedative", with mild, relatively prolonged action most useful in "functional disorders" and "certain organic diseases"[1],

. . . with naturally occurring belladonna—not the synthetic alkaloids,

. . . is unusually palatable—a light, pleasant tasting elixir colored an attractive orange-red.

FORMULA:

5 cc. (one teaspoonful) of the elixir represents:

Butisol Sodium (Sodium 5-Ethyl-5-Secondary Butyl Barbiturate McNeil) . . . . . 10 mg. (1/6 gr.)

Ext. Belladonna . . 15 mg. (1/4 gr.)

SUPPLIED:

Elixir Butisol-Belladonna in bottles of one pint and one gallon.

Samples on request.

1. Dripps, R. D.: Selective Utilization of Barbiturates, J.A.M.A. *139*:148-150 (Jan. 15) 1949.

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In irritable colon . . . emotional diarrhea . . .

peptic ulcer . . . pyloro-duodenal irritability . . .

pyrosis . . .

functional dysmenorrhea . . .

diarrhea due to acute

gastroenteritis or

ulcerative colitis . . .

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Experimental Surgery

Autologous Ureteral Grafts

A large segment of denervated ureter can be substituted for the common bile duct in dogs and may remain viable up to six months. However, regurgitation of intestinal contents up the bile ducts results in subsequent hepatitis and chronic cholangitis, report Dr. I. T. Rieger and associates of the Presbyterian Hospital, Chicago. The operation was performed in 3 stages. The lower end of the right ureter was dilated by ligation a week before performing the anastomosis. The distal end of the dilated ureter and the proximal stump of the resected bile duct were joined and the proximal right ureter was anastomosed to the jejunum. After a variable period of time to establish collateral circulation, the ureter was separated completely from the normal anatomic connections. No stricture developed, and the transplant was found to persist as an epithelized muscular tube.

J. Urol. 69:487-491, 1953.

"Yeah, just came out of the doctor's office. Put me on a diet."

Endocrinology

Sex Hormones and Lipids

Although atherosclerosis and some aspects of lipid metabolism show sex differences, physiologic oral doses of sex steroid hormones do not consistently alter serum lipids and lipoproteins of men and women. Drs. S. J. Glass and associates of Cedars of Lebanon Hospital, Los Angeles, and the University of California, Berkeley, treated 31 subjects with estradiol, methyl testosterone, and progesterone, alone and in various combinations, for several months. Cholesterol and esters, phospholipids, and lipoproteins were analyzed by ultracentrifuge before, during, and after therapy.

Dermatology

Antihistamines and Mycoses

In vitro fungistatic property is found in some antihistaminic drugs such as Di-Paralene, Diatrine, Benadryl, Thephorin, and Pyribenzamine. However, none of the drugs is fungicidal, according to Dr. Willson J. Fahlberg of Baylor University, Houston. Di-Paralene, the most active inhibitory agent, is effective in small amounts of 0.5 to 0.75 mg. per cubic centimeter for all fungi tested, except *Cryptococcus neoformans*. Specimens for the tests were human sources of *Trichophyton, Epidermophyton, Hormodendrum, Monosporium, Phialophora, Microsporum, Histoplasma, Blastomyces, Candida, Cryptococcus,* and *Sporotrichum.*

J. Invest. Derm. 20:171-176, 1953.

CONSTIPATION*

possibly the

greatest single medical problem

of the patient who is over **40**

In these cases, laxation *alone* isn't enough.

Because constipation in this age group is usually associated with indigestion and biliary stasis.

Prescribe Caroid[R] and Bile Salts with Phenolphthalein to obtain these three beneficial actions:

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Supplied — bottles of 20, 50, 100, 500 and 1000 tablets

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*Rehfuss, M. E.: Indigestion, Philadelphia, W. B. Saunders Co., 1943, p. 322

CAROID AND BILE SALTS *tablets*

Specifically indicated in ***biliary dyspepsia and constipation***

Radiology

Defense Against Radiation

Decrease of radiosensitivity by cysteine may be related to oxygen availability. When 1,200 mg. per kilogram of cysteine is given intravenously to mice just before irradiation, the lethal dose is 1,000 r; if 10% oxygen is breathed before and during exposure, the dose can be increased to 1,200 r, report Drs. Sylvia H. Mayer and Harvey M. Patt of the Argonne National Laboratory, Lemont, Ill. Without treatment, the lethal dose is about 600 r. Dinitrophenol, which causes anoxia by increasing oxidative metabolism, also reinforces protection by cysteine.

Federation Proc. 12:94-95, 1953.

Vitamins

Cholesterol Formation

Ascorbic acid regulates the rate of formation of cholesterol in guinea pigs. Dr. Charles Glen King and associates of Columbia University, New York City, report that animals fed food free from vitamin C demonstrated a 200% acceleration in cholesterol synthesis in the early stages of scurvy, followed by an increase of 600% when the disease was well advanced. The guinea pigs had been injected with acetate compounds tagged with radioactive carbon. The greatest acceleration in cholesterol synthesis appeared in the adrenal glands; the heart, arteries, liver, and lungs also showed increases.

Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The July 15 winner is

R. Harris, M.D.
Albany, N.Y.

Mail your caption to
The Cartoon Editor
Caption Contest
No. 2

MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

"He may be a memory expert but he always forgets to pay his doctor's bill."

Pediatrics

Diagnosis of Histoplasmosis

Bone marrow cultures may be of considerable diagnostic value for infants and children with unexplained fever, lymphadenopathy, splenomegaly, hepatomegaly, or pulmonary findings which may indicate disseminated histoplasmosis. Of 76 bone marrow cultures taken from children, 5 were positive for histoplasmosis, report Drs. Robert J. Rohn and William H. Bond of Indiana University, Indianapolis. Marrow biopsies alone identified 2 of the positives, but culture of the organisms was required for diagnosis in 3 cases. Cultures usually take twelve to fourteen days for growth, but should not be considered negative until observed for at least a month.

Blood 8:329-335, 1953.

Experimental Surgery

Tracheobronchial Resection

The mortality rate is not great with extensive surgery of the tracheobronchial tree in dogs. Drs. Lawrence B. Kiriluk and K. Alvin Merendino of the University of Washington, Seattle, report that bronchial stem resections with direct anastomosis can be done with safety and that fatalities from one-stage reconstruction after carinal and bronchial or pulmonary section are not unreasonably high. The distance and direction of the transplantation of a bronchus to a contralateral structure or a new site on the trachea are limited by the length of the pulmonary veins and, on the left side, by the aortic arch. Approximation of disproportionate lumina may be effected by fitting the anastomosal segments to size and shape at either or both ends, since healing appears to be unaffected by the plane of transection. Nonabsorbable sutures are advised in establishing union under tension. Long defects in the trachea can be successfully bridged by tantalum mesh gauze alone. Postoperative respiratory and ventilatory function of distal pulmonic tissue is apparently normal.

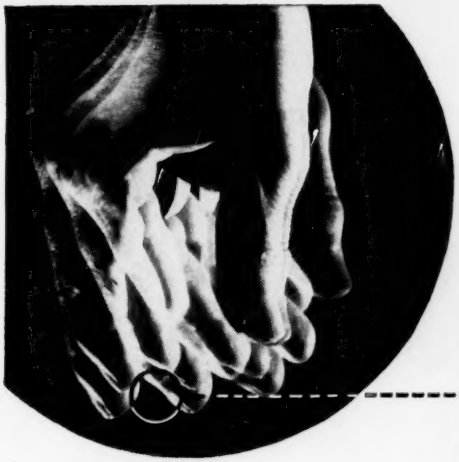
Ann. Surg. 137:490-503, 1953.

Urology

Hormone Treatment of Interstitial Cystitis

Cortisone increases bladder capacity and decreases or abolishes vesical pain in some cases of interstitial cystitis, although improvement is temporary. In 3 patients treated with cortisone, amount of voidings increased, urinary frequency decreased, and suprapubic pain either disappeared or lessened significantly, reports Dr. John E. Dees of Duke University, Durham, N. C. However, pain and other symptoms recurred in one week to thirteen months after the drug was discontinued. A second course of cortisone treatment yielded slower but satisfactory results in all 3 cases. The drug was given in doses of 300 mg. the first twenty-four hours, 200 mg. the second twenty-four hours, 100 mg. daily for two to three weeks, and then 50 mg. daily for two to six weeks or longer.

J. Urol. 69:496-502, 1953.



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ERTRON® S-M, new treatment for the arthritic syndrome, quickly relieves the two symptoms from which the arthritic asks prompt relief—pain and skeletal muscle spasm.

In addition, Ertron S-M has a gradual systemic action which gives long-range improvement, resulting in increased mobility of joints, decrease in swelling, while the patient is kept comfortable and free of pain.

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Systemic Effectiveness—Activation products (activated vaporized ergosterol-Whittier Process—biologically standardized) having antirachitic activity of fifty thousand U.S.P. units.....5 mg.

Pain Relief—Salicylamide.....162 mg.

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—Bottles of 100 capsules—

Potent Ertron S-M constitutes a therapeutic regimen which must be directed by the physician.

Also available: regular Ertron—for dependable, prolonged arthritis management; and Ertron Parenteral when combined oral and parenteral administration is indicated.

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"Doctor, which do you see most?—

...T.V.V.—or mixed or non-specific vaginal infections?"

If you prescribe AVC Improved routinely for vaginitis, the question is academic.

AVC is specific for T.V.V., and since it is both bactericidal and fungicidal, AVC is also exceptionally effective in moniliasis as well as in mixed and non-specific bacterial infections.

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ALLANTOMIDE VAGINAL CREAM WITH 9-AMINOACRIDINE

Because it Encompasses so Wide a Range of Specific and Mixed Infections

AVC Improved is trichomonicidal, bactericidal and fungicidal—an exceptionally valuable agent in the treatment of vaginitis due to mixed infections (including certain fungi), Gram-positive cocci, Gram-positive and Gram-negative bacilli, anaerobic organisms.

The widespread use of AVC in clinical practice attests not only to its therapeutic effectiveness but to its pharmaceutical elegance as well. Physicians and patients appreciate the fact that a wide range of vaginal infections can be readily controlled with AVC —a non-staining, deodorizing, soothing cream.

AVC Improved is supplied in 4-oz. tubes, with or without the convenient, newly developed plastic applicator.

FORMULA:

9-Aminoacridine HCl 0.2%
Sulfanilamide 15.0%
Allantoin 2.0%
with lactose in a water-miscible base, buffered with lactic acid to pH 4.5

Urology

Urinary Tract Infection

Furadantin is a systemically administrable nitrofuran effective against a wide range of gram-negative and gram-positive bacterial and protozoal invaders of the urinary tract. Dr. Sidney Mintzer and associates of Cook County Hospital, Chicago, observed no sensitization, crystalluria, or abdominal distress in 79 patients receiving doses as high as 10 to 12 mg. per kilogram daily for as long as fourteen days. The dosage caused nausea in 6 and emesis in 1 of 25 patients, but 5 to 7 mg. per kilogram produced nausea in only 2 of 59. Good results achieved in 8 of 12 patients with chronic uropathy are significant because previous treatment with antibacterial agents had been unsuccessful. In vitro synergism exists between Furadantin and penicillin and streptomycin. Rickettsiae, viruses, and fungi are not affected by the drug in vitro.

Antibiot. & Chemother. 3:151-157, 1953.

"That ruptured hernia took longer than I thought. Am I late?"

Hormones

Development of Mammary Gland

Good lobuloalveolar growth is induced in rats, after removal of pituitary and ovaries, by daily injection of estrone, progesterone, prolactin, and growth hormone, report Dr. William R. Lyons and associates of the University of California, Berkeley. During the second week, daily doses of prolactin, growth hormone, thyroxin, and cortisone or ACTH cause proliferation of alveolar cells, desquamation in colostrum, and finally secretion of milk.

Therapy

Isoniazid and Leprosy

Isonicotinic acid hydrazide is beneficial in treatment for leprosy in rats. The drug was given orally in daily doses of 20 mg. per kilogram of body weight at the onset of infection and continued for either four or twenty weeks, reports Dr. J. C. Cruickshank of the London School of Hygiene and Tropical Medicine. All animals treated for twenty weeks remained in good health for more than ten months and are still being observed. The four-week course and another four-week treatment begun one month after infection were also effective, although some animals died of abdominal abscesses from secondary bacterial invasions. Rats not given isoniazid therapy died four to ten months after onset of disease.

Lancet 264:624-625, 1953.

Antibiotics

Streptomycin in Radiation Injury

Mortality caused by combined irradiation and thermal burns in swine was reduced from 90 to 20% by the parenteral administration of streptomycin, report Dr. Hamilton Baxter and associates of Royal Victoria Hospital and McGill University, Montreal. Treatment with 500 mg. of streptomycin daily for twenty-two days beginning twenty-four hours after exposure to a total dose of 400 r apparently prevented hemorrhage from the bowel and mouth. Healing of second-degree lesions produced by ignition of a mixture of magnesium powder and barium peroxide was also accelerated. Streptomycin did not stimulate recovery of the blood-forming tissues.

Ann. Surg. 137:450-455, 1953.

Plastic Surgery

Bone Graft

Radioactive phosphorus injected immediately after implantation of bone indicates whether or not the graft will take. After successful operation, phosphorus is carried into the graft by the exchange of tissue fluid, and radioactivity increases as new blood vessels develop. Drs. Clifford L. Kiehn and Donald M. Glover of Cleveland believe the method to be particularly helpful after use of bone from a bank.

Cardiology

Ectopic Ventricular Beats

After atrial systole the auriculo-ventricular valves in normal heart beats are nearly or entirely closed before onset of ventricular contraction. Ectopic ventricular beats shut the A-V valves from an open position by regurgitation of blood into the atrium, report Drs. Robert C. Little and James G. Hilton of the University of Tennessee, Memphis. Right atrial and ventricular pressures of exposed dog hearts were determined by optical manometers while heart sounds were recorded electrically. The first sound occurred later with ectopic than with ordinary ventricular beats.

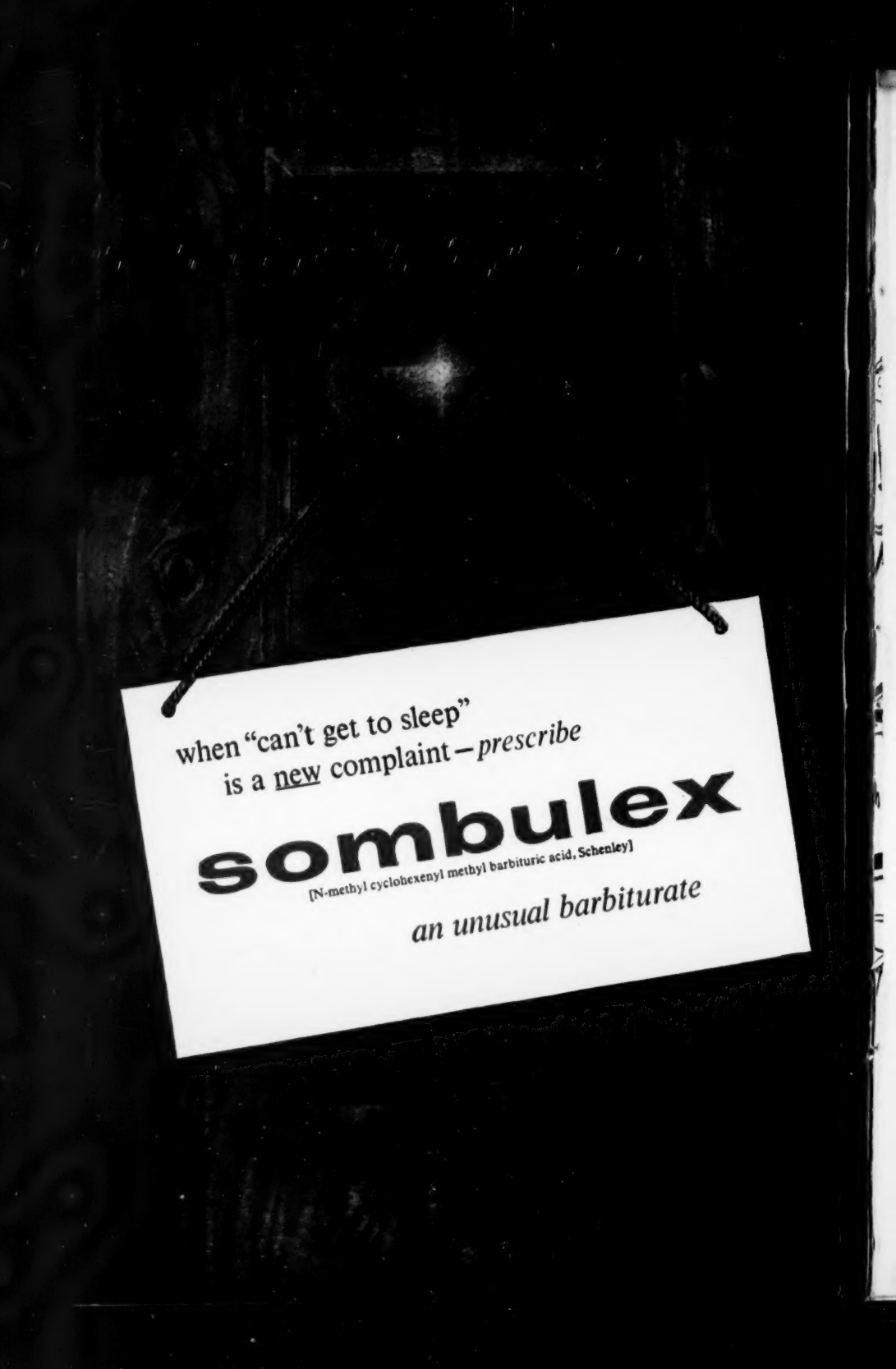
Federation Proc. 12:89, 1953.

Angiology

Inhibition of Atherogenesis

Control of hypercholesteremia and subsequent atheromas in chickens results from enteral administration of ferric chloride. Degree of atheromatosis in fowls fed bile and cholesterol is approximately 4 times as great as in fowls fed bile, cholesterol, and iron, report Dr. M. D. Siperstein and associates of the University of California, Berkeley. No untoward reactions were observed as a result of these diets. The mechanism of iron protection may be through the precipitation of bile salts in the intestine, resulting in suppression of cholesterol absorption.

Science 117:386-389, 1953.


when "can't get to sleep"
is a new complaint—prescribe
sombulex
[N-methyl cyclohexenyl methyl barbituric acid, Schenley]
an unusual barbiturate

sombulex* *is an unusual barbiturate*

because it works within 15 to 30 minutes and leaves the bloodstream within 3 to 4 hours, thus avoiding the danger of hangover for patients who do not need heavy barbiturate action.

When the stresses and strains begin to tell

...when the mind won't let the body rest, and patients complain for the first time..."Doctor, I can't get to sleep"... SOMBULEX is the prescription of choice for these first-time barbiturate patients. For them, 1 or 2 tablets taken with water or a warm beverage usually suffice to induce a night's refreshing sleep without hangover. Patients will not readily identify SOMBULEX as a barbiturate.

The unusual uses of **sombulex**

Because of its rapid yet nonpersistent action, 1 SOMBULEX Tablet will help restore *interrupted* sleep without subsequent hangover, or permit a relaxing cat nap before a busy evening. One SOMBULEX Tablet also will help the new night-shift worker adjust to a daytime sleeping schedule. NOTE: The action of SOMBULEX may be too short lived for the patient already dependent upon long-acting barbiturates. SOMBULEX is supplied in bottles of 100 tablets, each containing 0.26 Gm. (4 gr.) N-methyl cyclohexenyl methyl barbituric acid, *Schenley*.

SCHENLEY LABORATORIES, INC. schenley

Gastroenterology

Duodenal Intubation

A powerful fixed magnet used in radar, Alnico Five, may be used to control the progress of a magnetic-tipped tube in passage through the pylorus. Another method employs a threaded magnetic capsule which is swallowed and manipulated into the duodenum by the fixed magnet under fluoroscopic visualization, remark Drs. John W. Devine and John W. Devine, Jr., of Lynchburg, Va. The thread, brought back through the nose, acts as a filiform guide for an air vent tube also equipped with a magnetic end. When all other procedures fail, intubation can be accomplished by using a flexible cable to turn and advance a rubber catheter with a coudé tip.

Surgery 33:513-515, 1953.

Psychiatry

Therapy of Behavior Disorders

The manifest symptomatology of psychiatric disorders is effectively subdued in some children by oral administration of Benadryl. Patients of 6 to 12 years of age were treated with increasing doses of the drug for a four-week period at the Bellevue Hospital, New York City, by Drs. Abraham S. Effron and Alfred M. Freedman. A dosage schedule, beginning at 10 mg. three times daily and increasing to 30 mg. four times daily, was tested in cases diagnosed as schizophrenic, organic, primary behavior disorder, psychopathic, and mental defective. Of the 44 children so treated, 61% revealed improvement, 34% remained unchanged, and 5% retrogressed. No change was noted in the soft neurologic signs or in pathognomonic symptomatology and fantasy life. However, anxiety symptoms were reduced in 54%; relationship problems with adults improved in 56% and with peers in 44%; symptoms of hyperactivity were lessened in 29%; and 37% of depressed patients were aided. Children with primary behavior disorders, especially with manifest anxiety, were the most benefited.

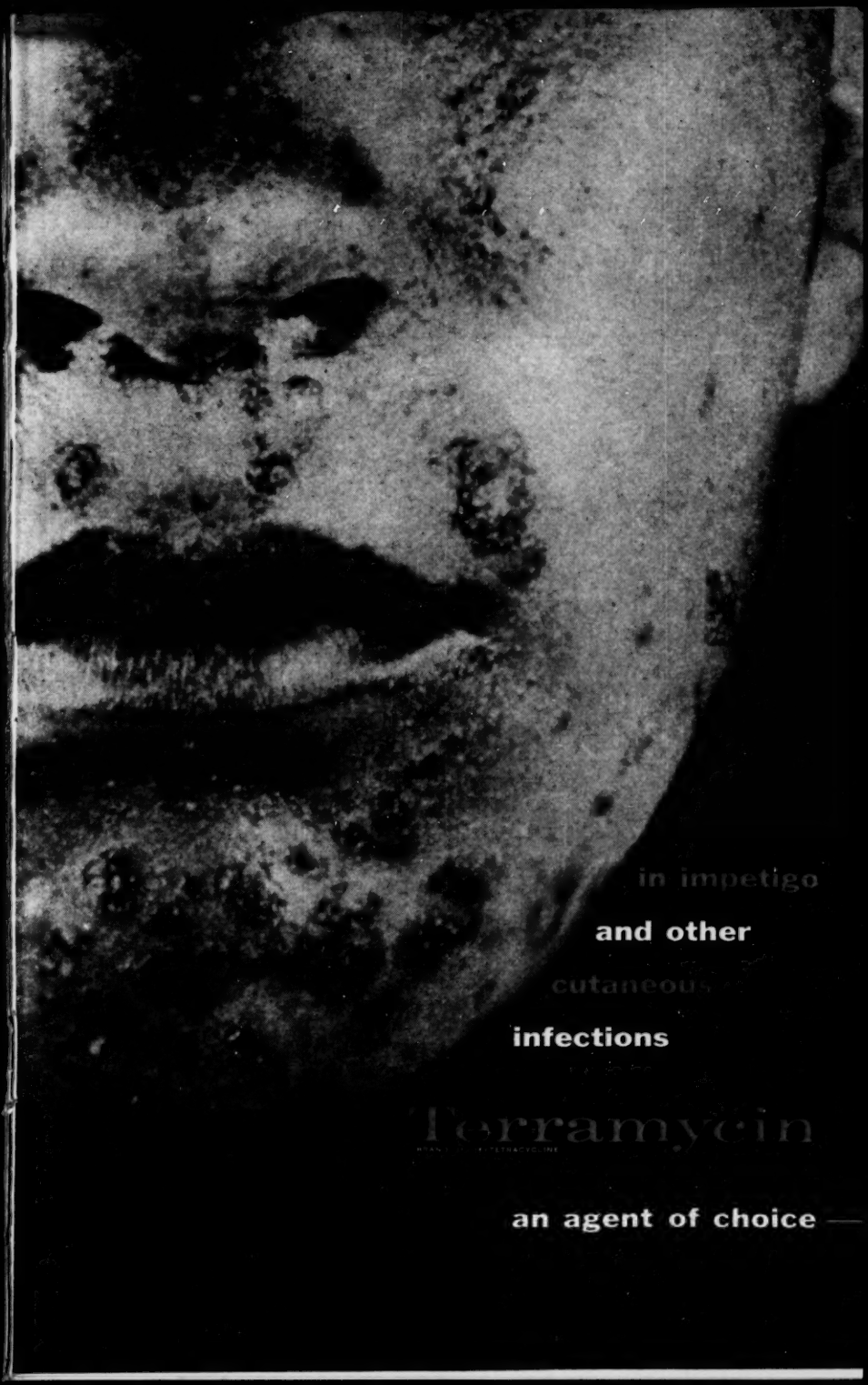
J. Pediat. 42:261-266, 1953.

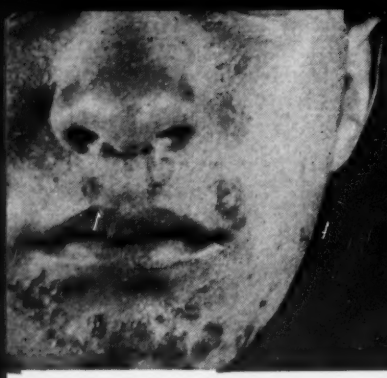
Ophthalmology

Urecholine for Glaucoma

Treatment for chronic noncongestive glaucoma with 1% Urecholine is as effective as with 1 to 2% pilocarpine or 0.75% carbamylcholine chloride (Doryl). Drs. Frederick Frisch and Irving H. Leopold of the Wills Eye Hospital, Philadelphia, find the drug ineffective when the disease is secondary to venous occlusion. The substance, used in 1:10,000 Zephiran chloride solution, caused a slight allergic reaction in 1 of 42 eyes and slight irritation in 2. Bronchoconstriction, a possibility in asthmatic patients, did not occur. The compound, which is the urethane of beta-methylcholine chloride, is more resistant to cholinesterase than acetylcholine and also combines the two components individually responsible for making Doryl and acetyl-beta-methylcholine (Mecholyl) more stable than acetylcholine.

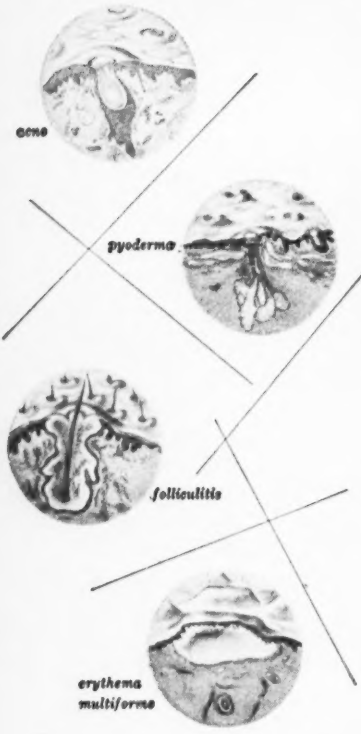
Am. J. Ophth. 36:442-445, 1953.


in impetigo
and other
cutaneous
infections
Terramycin
an agent of choice —



skin infections

antibiotics



Since cutaneous bacterial infections "probably account for more disability than any other group of skin diseases,"[1] the availability of broad-spectrum Terramycin has been particularly helpful in controlling these common disorders. This pure, well-tolerated antibiotic is markedly effective against the wide range of organisms often implicated as primary or secondary pathogens in skin disease. Successful clinical experience[2,3,4] in the treatment of impetigo, furunculosis, acne, pyodermas, erythema multiforme and other cutaneous infections recommends the selection of Terramycin as an agent of choice in common diseases of the skin. Terramycin is supplied in such convenient forms as Capsules, Tablets (sugar coated), Oral Suspension (flavored), new Pediatric Drops, and Ointment (topical), as well as other dosage forms for oral, intravenous, and topical administration.

1. *Bednar, G. A.: South. M. J. 46:298 (March) 1953.*
2. *Wright, C. S., et al.: A. M. A. Arch. Dermat. & Syph. 67:125 (Feb.) 1953.*
3. *Robinson, H. M., et al.: South. M. J. (in press).*
4. *Andrews, G. C., et al.: J. A. M. A. 146:1107 (July 21) 1951.*

Terramycin

BRAND OF OXYTETRACYCLINE

Pfizer **CHAS. PFIZER & CO., INC.**

Brooklyn 6, N. Y.

Use of protective devices and education of the public on aquatic hazards would save many lives.

Prevention of Drowning

HARRY F. DIETRICH, M.D.
University of California, Los Angeles

DROWNING claims 7,000 lives annually in the United States. Education supplemented by protective devices and laws is the cornerstone of any program to reduce this needlessly high toll.

About 10% of those who drown are children under 5 years of age. In the first ambulatory year, drowning is the principal cause of accidental death. The prevention of drowning of the very young demands 100% protection.

However, even the youngest can benefit from educational efforts. The child must be taught at the first possible moment to respect the dangers inherent in water, explains Harry F. Dietrich, M.D., who finds that far too much emphasis is placed today on being sure that the small child is not afraid of water.

The young infant in his bath should be taught a respect for, rather than a fear of or indifference to, the potentialities of water. The child must learn that the untrained human body is not unsinkable. Experience should teach him that fluid in the mouth, eyes, and air passages may occasion discomfiture without any mitigating emotional rewards.

The child should learn to swim at as early an age as the environment allows. Learning to float is the first step. But about the time the child proudly professes to be a good swimmer, he should, without warning, be introduced into the water fully clothed. Then the lesson will be brought home that ordinary clothing will nullify the newly gained ability to stay afloat easily.

Further training must be in accordance with the aquatic opportunities and hazards to which the person may be exposed. Types of knowledge that must be acquired in special situations include the action of currents and tides; what to do in surf, undertow, whirlpools, and among rocks and coral; the handling of rafts, canoes, or other vessels; and how to dive, with or without oxygen equipment.

Protective devices, such as life jackets, should always be available and used. Especially must elderly persons, accounting for 14% of all drowning deaths, be conversant with the use of protective devices and avoid swimming in surf, tides, and currents.

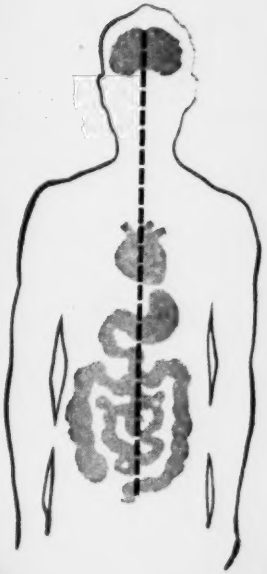
However, after early childhood, protective devices and laws are of value only if people are educated to accept and use them.

The prevention of drowning. GP 7:61-65, 1953.

Nellie Nifty, R.N.

by kaz

sedation
all along
the line



F

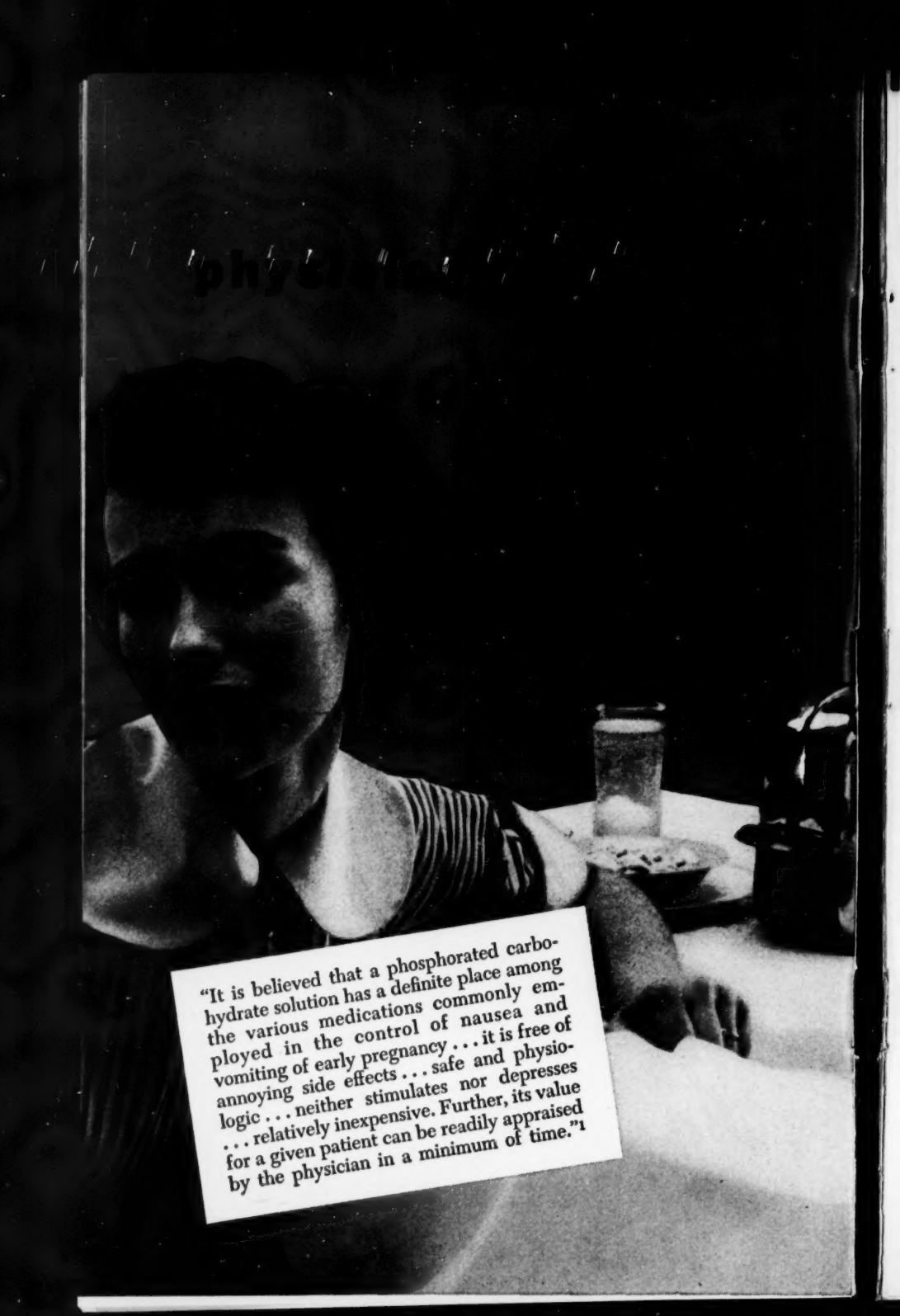
Mephenesin	250.0 mg.
Glutamic Acid HCl	62.5 mg.
Phenobarbital	7.5 mg. (1/8 gr.)
l-Hyoscyamine HBr	0.0625 mg.

DOSAGE:

SUPPLIED:

KŪSED

For victims of anxiety and nervous tension


"It is believed that a phosphorated carbohydrate solution has a definite place among the various medications commonly employed in the control of nausea and vomiting of early pregnancy . . . it is free of annoying side effects . . . safe and physiologic . . . neither stimulates nor depresses . . . relatively inexpensive. Further, its value for a given patient can be readily appraised by the physician in a minimum of time."1

"morning sickness"

EMETROL®

[PHOSPHORATED CARBOHYDRATE SOLUTION]

In a well-controlled study, Crunden and Davis[1] recently found that EMETROL abolished or reduced the severity of pregnancy nausea in 78.8 percent of 123 patients . . . *usually within 24 hours.* In contrast, a placebo of similar taste and appearance proved moderately beneficial in only 15.6 percent of 122 controls.

EMETROL works *physiologically,* providing rapid relief in non-organic nausea and vomiting without recourse to antihistaminics, barbiturates, or narcotics; it thus may be administered freely without fear of distressing side-effects.

EMETROL contains balanced amounts of levulose and dextrose in coacting association with orthophosphoric acid, stabilized at an optimally adjusted pH. The dosage of EMETROL for nausea of pregnancy is 2 tablespoonfuls taken *undiluted* immediately on arising, repeated as required if nausea recurs.

Also beneficial in other types of vomiting: EMETROL has also been used successfully in acute infectious gastroenteritis (intestinal "flu"), motion sickness, and nausea due to drug therapy or anesthesia. Samples and literature giving dosages for the various indications of EMETROL are available on request.

IMPORTANT: EMETROL must *not* be diluted or followed by any liquids for at least 15 minutes.

SUPPLIED: Bottles of 3 fl. oz. and 16 fl. oz. through all pharmacies.

1. Crunden, A. B., Jr., and Davis, W. A.: Am. J. Obst. & Gynec. 65:311, 1953.

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BASIC SCIENCE *Briefs*

Endocrinology

Adrenal Cortex and Androgens

Precursors of androgens and 17-ketosteroids are, in order of potency, hydrocortisone, cortisone, and corticosterone. However, other androgens or precursors must be liberated by the intact adrenal gland, since bilateral adrenalectomy greatly reduces androgen excretion, even with hormonal replacement therapy. Dr. Paul L. Munson and associates of Harvard University and Peter Bent Brigham Hospital, Boston, measured urinary values of 17-ketosteroids and androgens in orchidectomized patients with prostatic cancer before and after total removal of both adrenals.

Physiology

Hemorrhagic Shock

Insufficient coronary flow resulting in myocardial failure is a factor in hemorrhagic shock in dogs. Animals were allowed to bleed, and coronary flow was then measured with a Gregg cannula and recording rotameter. Drs. Robert B. Case and Stanley J. Sarnoff of Harvard University, Boston, measured pressures in both auricles, the pulmonary artery, and the femoral artery. With systolic pressures at 30 to 45 mm. of mercury and reduced coronary flow, left auricular pressure rose and ventricular fibrillation began. On revival of coronary circulation with a Dale-Schuster pump, left auricular pressures fell to normal levels even while arterial hypotension was maintained. The intraarterial infusion of blood proved no more rapid or effective than intravenous technic in restoring coronary flow or arterial pressure.

Federation Proc. 12:24, 1953.

Neurology

Brain Metabolism

A mitochondria suspension of rat brain stimulated by electric pulses or a constant current undergoes changes resembling those induced in sliced tissue or occurring with physiologic activity. At the University of Illinois, Chicago, Drs. L. G. Abood and R. W. Gerard doubled oxygen consumption and inhibited oxidative phosphorylation 75% by waves of 0.5-ms. duration, 60-per-second rate, and effective strength of 5 volts. Atropine inhibited rapid oxygen consumption with pyruvate, succinate, glutamate, and other substrates. Azide and several parasympathomimetic drugs, in total amounts not affecting unstimulated metabolism, did not change results of excitation.

Federation Proc. 12:3, 1953.

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Hemorrhage

Blood Loss Tolerance

For a few days after birth, red cell counts and hemoglobin levels are higher in dogs than at any age up to 6 months. This condition probably contributes to unusual tolerance to hemorrhage; high resistance to anoxia found in young animals may also be a factor, believes Dr. H. E. Ederstrom of the University of North Dakota, Grand Forks. When blood amounting to 5% of body weight was withdrawn at ages of 1 and 2 days, 7 of 19 dogs survived twenty-four hours or more; after 4.5% loss, 7 of 16. Just 1 of 34 animals 10 days to 6 months old lived after 5% blood loss; the surviving dog was only 13 days old.

Federation Proc. 12:37, 1953.

Lipids

Atherogenesis in the Elderly

Women over 65 years of age have significantly higher levels of all serum lipids except neutral fats than men of the same age, although incidence of atherosclerosis is higher for males. Drs. Menard M. Gertler and Bernard S. Oppenheimer studied 38 men and 91 women from the Home for the Aged and Infirm Hebrews, New York City, and found the women had higher levels of free, esterified, and total cholesterol, total lipids, lipid phosphorus, and S_f 10-20 molecules. The relationship between serum total cholesterol and S_f 10-20 was significant in men, 0.59 ± 0.15, but not in women, 0.21 ± 0.12. A steady rise in the S_f 10-20 molecules after the age of 65 occurs in women, whereas a stationary level or even slight diminution is found in men. The data suggest that an unknown intrinsic factor exists which prevents development of atherosclerosis in women in spite of the higher serum total cholesterol levels and S_f 10-20, or that the S_f 10-20 molecules do not have the same significance in the genesis of atherosclerosis in women as in men.

Circulation 7:533-544, 1953.

Cytology

Beta Cells and Diabetes Mellitus

Degranulation of beta cells in pancreatic islets is almost definite confirmation of the diagnosis of diabetes mellitus. Autopsy specimens from 995 diabetic patients studied by Dr. E. T. Bell of the University of Minnesota, Minneapolis, revealed complete or partial beta cell degranulation in all cases under 20 years of age, in 79.5% between the ages 20 and 40, in 48.2% from ages 40 to 60, and in 33.6% over the age of 60. Correlation of extent of degranulation and severity of disease was noted except after the age of 50. Human studies, in addition to animal research, confirm the relationship between insulin content of the pancreas and presence of beta granules, indicating that the granules are the precursors of insulin.

Diabetes 2:125-129, 1953.

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Pyridoxine Hydrochloride	1 mg.
➡ Vitamin B_{12} (as vitamin B_{12} concentrate)	2 mcg.
Pantothenic Acid (as calcium pantothenate)	10 mg.
Liver Fraction 2, N.F.	0.3 Gm. (5 grs.)
Brewer's Yeast, Dried	0.15 Gm. (2½ grs.)

Sur-bex with C contains 150 mg. of ascorbic acid (5XMDR*) in addition to the vitamin B complex factors above.

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CURRENT
BOOKS *and* PAMPHLETS

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BEDSIDE DIAGNOSIS *by* Charles Seward. 2d ed. 396 pp., ill. E. & S. Livingstone, Edinburgh. 17*s.* 6*d.*

HEADACHES: THEIR NATURE AND TREATMENT *by* Stewart George Wolf *and* Harold G. Wolff. 177 pp., ill. Little, Brown & Co., Boston. $2.50

Gynecology & Obstetrics

DIE VAGINALEN BAUCHHÖHLENOPERATIONEN *by* Paul Werner *and* J. Sederl. 52 pp., ill. Urban & Schwarzenberg, Vienna. 230 Sch.

Cardiovascular Diseases

CLINICAL ELECTROCARDIOGRAPHY: A TEXTBOOK FOR PRACTITIONERS AND STUDENTS *by* Max Holzmann; *translated by* Douglas Robertson. 647 pp., ill. Staples Press, New York City. $21

PHYSIOLOGIC THERAPY FOR OBSTRUCTIVE VASCULAR DISEASE *by* Isaac Starr. 38 pp. Grune & Stratton, New York City. $2.50

Child Psychiatry

THE PSYCHOANALYTIC STUDY OF THE CHILD *edited by* Ruth S. Eissler *et al.* International Universities Press, New York City. $7.50

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PAIN SENSATIONS AND REACTIONS *by* James Daniel Hardy, Harold G. Wolff, *and* Helen Goodell. 435 pp., ill. Williams & Wilkins Co., Baltimore. $6.50

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Patients... I have met

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Barber Shop

A small boy insisted on going into the examining room with his mother. As my nurse draped a sheet over her, the son said, "What's the doctor going to do, Mama, give you a haircut?"—W.A.M.

Silver Lining

For years, two sisters had lived together. The elder died at the age of 97. It was my lot to break the news to the 95-year-old survivor and I was fearful that the shock might be too much for her. My worries were needless. The old lady bore up wonderfully.

"Now," she remarked, "I can make the tea the way I like it."—B.P.S.

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BREON

Combatting Pathologic Fetor

Obnoxious odors characteristic of many pathological conditions often create a problem almost as demanding as treatment of the disease itself. Putrefying suppurative lesions are perhaps the most common offenders. Though more limited in number, colostomies pose an acute odor problem. Odors emitted by cancer and abscesses of the mouth or certain throat ailments distress both physician and patient.

Until recently such obnoxious odors have been accepted as unavoidable. But now, deodorization with chlorophyll-derivatives offers a practical effective solution. Removal of disease odors often helps the patient adjust to a difficult social, psychic, and physical situation and lifts the morale of the physician, nurse, and other hospital personnel.

FETOR FROM CARCINOMA OF THE TONSILS, ozena, and varied otolaryngological diseases has been effectively deodorized by use of chlorophyll-derivatives both in this country and abroad.

Becker[1] recently at the university in Kiel found that deodorization of fetor from carcinoma of the tonsils was obtained after ingestion of the second 0.1 gm. tablet and could be maintained by continued administration of one tablet three times daily. Odors from massive penetrating tonsillar abscesses, syphilitic ozena, and aphthous stomatitis were suppressed by this same dosage. Becker also noted that fetid suppuration of the nasal cavities lost its bad odor after one filling of the maxillary sinuses with a suspension of chlorophylls.

After using a chlorophyll-derivative mouth wash on 103 patients with bullous lesions of the mouth due to pemphigus, Combes[2] commented on its "significant action" in deodorizing "foul-smelling lesions secondarily infected by anaerobic proteolytic bacteria." Reporting on 1200 cases of varied infections, Gruskin[3] noted "in cases of ulcerative carcinoma where a great deal of putrefaction exists (obviously the result of secondary bacterial infection and proteolysis) the use of chlorophyll tends to clear up this foul odor rather promptly."

with Chlorophyll

DIVERSE SUPPURATIVE WOUNDS which had been described as "draining profusely for months and were so malodorous as to deprive patients and attendants of appetite" brought this comment from Bowers,[4] "Our first observation on beginning use of chlorophyll was that this odor immediately disappeared." Bowers' report covered over 400 cases under 35 military medical officers during a nine-month period.

Recognizing the marked deodorizing potency of topically applied chlorophyll-derivatives, the Reference Committee of the Council of Chemistry and Pharmacy of the American Medical Association[5] said, "Chlorophyll was found consistently to be an effective deodorant when used in foul smelling wounds."

COLOSTOMY, FISTULAE, AND FECAL ODORS are among the most repelling and difficult to manage, yet success in using chlorophyll-derivatives for their control under varied conditions is being confirmed by an increasing number of investigators.

In colostomies, Goodman[6] reports elimination of attending fecal odors by inserting a capsule containing water-soluble chlorophyll and kaolin within the colostomy immediately after the morning irrigation and evacuation. Weingarten and Payson[7] noted complete disappearance of fecal odors within 48 hours after treatment was begun with a dosage of four to eight chlorophyll-derivative tablets daily. On a similar dosage schedule, Joseph[8] eliminated fecal odors in colostomy, fistulae, and bedridden tubercular patients within 49 hours. These reports tend to agree with Westcott's[9] positive results for systemic deodorization.

Deodorization with chlorophyll-derivatives offers a new method of encouragement to patients and may suggest to the physician other applications within his practice. Development of pharmaceutical quality chlorophylls for specific medical applications is an important part of the scientific research program of American Chlorophyll, who first produced chemically-measurable water-soluble derivatives of chlorophyll commercially in 1933. While American Chlorophyll has no product to sell directly to physicians, we will be glad to give you such information as we can on special uses.

WRITE FOR "CHLOROPHYLL 1953" by Dr. Walter H. Eddy

On these pages is only a part of the story on chlorophyll. We hope to tell more in subsequent issues. In the meantime, why not send for your FREE COPY of this completely documented, authentic review of research literature on chlorophyll from Joseph Priestley in 1772 to date? 60 pages, 156 references.

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(1) Becker, K., Abstract, J.A.M.A. 151:593, 1953. Original, Mün. med. Woch. 94:2225, 1952. (2) Combes, F. C., Zuckerman, R., Kern, A. B., N. Y. State J. Med. 52:1025, 1952. (3) Gruskin, B., Am. J. Surgery 49:49, 1940. (4) Bowers, W. F., Am. J. Surgery 73:37, 1947. (5) Moss, N. H., Morrow, V. A., Long, E. C., Ravdin, I., J.A.M.A. 140:1336, 1949. (6) Goodman, J. M., Surgery 28:550, 1950. (7) Weingarten, M., Payson B., Rev. Gastroenterol. N. Y. 18:602, 1951. (8) Joseph, M., West. J. Surg., Ob. & Gyn., 60:363, 1952. (9) Westcott, F. H., N. Y. State J. Med. 51:698, 1950.

Number, Please

My 6-year-old patient examined my stethoscope quizzically as I placed it against his chest. Then with a look of enlightenment he exclaimed, "I bet your phonin' my insides to see what's the matter."—J.T.

Page Malthus!

"The palpitation may start up once in a while," I warned a cardiac patient. "When it does, send for me."

Several weeks later the woman's young son dashed into my office. "Please, Doctor," he said, "Mom wants you to come over right away to stop the population!"—J.T.

Qualified

"This position calls for a responsible person," I told the pretty applicant for the technician's job.

"That's me, exactly," she said quickly. "Why, when Dr. Henderson told me he couldn't use me any more, he said I was responsible for more things than he could name in a day."—J.K.

Complication

My patient was waiting to leave the hospital.

"Well, I see you have completely recovered," I said.

"Not exactly," smiled the patient. "A complication has set in."

"How's that?" I inquired anxiously.

"I'm engaged to a girl back home," he replied shyly, "and I have fallen in love with my nurse."—W.J.B.

INDEX TO ADVERTISERS

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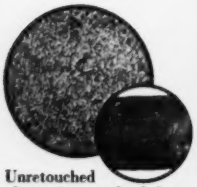

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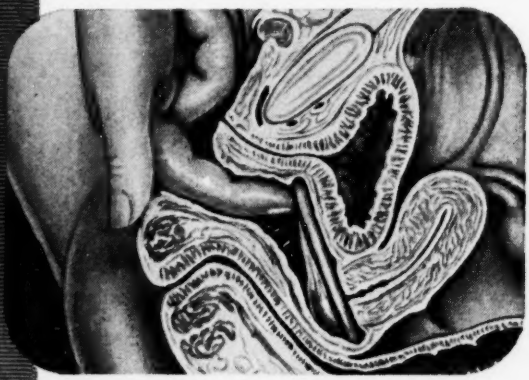

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